YK50

USER MANUAL

020-100630-01

CHRISTIE®

YK50

USER MANUAL

020-100630-01

NOTICES

COPYRIGHT AND TRADEMARKS

© 2012 Christie Digital Systems USA, Inc. All rights reserved.

All brand names and product names are trademarks, registered trademarks or trade names of their respective holders.

REGULATORY

The product has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a commercial environment. The product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of the product in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at the user's own expense.

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

이 기기는 업무용 **(A** 급 **)** 으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이점을 주의하시기 바라며 **,** 가정 외의 지역에서 사용하는 것을 목적으로 합니다 **.**

GENERAL

Every effort has been made to ensure accuracy, however in some cases changes in the products or availability could occur which may not be reflected in this document. Christie reserves the right to make changes to specifications at any time without notice. Performance specifications are typical, but may vary depending on conditions beyond Christie's control such as maintenance of the product in proper working conditions. Performance specifications are based on information available at the time of printing. Christie makes no warranty of any kind with regard to this material, including, but not limited to, implied warranties of fitness for a particular purpose. Christie will not be liable for errors contained herein or for incidental or consequential damages in connection with the performance or use of this material.

The product is designed and manufactured with high-quality materials and components that can be recycled and reused. This symbol **means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from regular waste. Please dispose of the product appropriately and according to local regulations. In the European Union, there are separate collection systems for used electrical and electronic products. Please help us to conserve the environment we live in!**

Canadian manufacturing facility is ISO 9001 and 14001 certified.

GENERAL WARRANTY STATEMENTS

For complete information about Christie's limited warranty, please contact your Christie dealer. In addition to the other limitations that may be specified in Christie's limited warranty, the warranty does not cover:

a. **Damage occurring during shipment, in either direction.**
b. **Projector lamps (See Christie's separate lamp program policy).**
c. **Damage caused by use of a projector lamp beyond the recommended lamp life, or use of a lamp supplied by a supplier other than Christie.**
d. **Problems caused by combination of the product with non-Christie equipment, such as distribution systems, cameras, video tape recorders, etc., or use of the product with any non-Christie interface device.**
e. **Damage caused by misuse, improper power source, accident, fire, flood, lightening, earthquake or other natural disaster.**
f. **Damage caused by improper installation/alignment, or by product modification, if by other than a Christie authorized repair service provider.**
g. **For LCD projectors, the warranty period specified applies only where the LCD projector is in "normal use." "Normal use" means the LCD projector is not used more than 8 hours a day, 5 days a week. For any LCD projector where "normal use" is exceeded, warranty coverage under this warranty terminates after 6000 hours of operation.**
h. **Failure due to normal wear and tear.**

PREVENTATIVE MAINTENANCE

Preventative maintenance is an important part of the continued and proper operation of your product. Please see the Maintenance section for specific maintenance items as they relate to your product. Failure to perform maintenance as required, and in accordance with the maintenance schedule specified by Christie, will void the warranty.

China RoHS Compliance Information

关于中国 《电子信息产品污染控制管理办法》的说明

- Environmentally Friendly Use Period

环保使用期限

The year number in the centre of the label indicates the Environmentally Friendly Use Period, which is required to mark on the electronic information product sold in China according to the China RoHS regulations.

本标志中表示的年数是根据 《电子信息产品污染控制管理办法》（2006 年 2 月 28 日）以及 《电子信息产品污染控制标识要求》（2006 年 11 月 6 日）制定的、适用于在中华人民共和国境内销售的电子信息产品的环保使用期限。

- Material Concentration Values Table

有毒有害物质含量表

Part Name	部件名称	**Material Concentration** **(** 有毒有害物质或元素 **)**					
		铅 （**Pb**）	汞 （**Hg**）	镉 （**Cd**）	六价铬 **(Cr 6+)**	多溴联苯 （**PBB**）	多溴二联苯醚 （**PBDE**）
Power supply	电源	X	O	O	O	O	O
Harness/cable	连接电线 / 缆	X	O	O	O	O	O
Motor	马达	X	O	O	O	O	O
PCB	电路板	X	O	O	O	O	O
Mechanical components*	机械附件	X	O	O	O	O	O

Note:

O : indicates that the concentration value of the particular hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C, is below the stipulated levels in China SJ/T11363-2006.

表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 规定的限量要求以下。

X: indicates that the concentration value of the particular hazardous substance contained in all the homogeneous materials for this part, according to EIP-A, EIP-B, EIP-C, may be above the stipulated levels in China SJ/T11363-2006.

表示该有毒有害物质至少在该部件的某一均质材料中的含量可能超出 SJ/T11363-2006 规定的限量要求。

* This part uses metallic alloys, which may contain Lead. 因该部件使用金属合金材料，故可能含有铅。

1: Introduction

1.1 Labels and Marking 1
1.2 General Features 1
1.3 Input Rating 1
1.4 Safety Warnings 2
1.4.1 Fuse Replacement 3
1.4.2 Pre-operational Checklist 3

2: Overview

2.1 YK50 Dual Arm Yoke 5
2.1.1 YK50 Dual Arm Description 6
Removing the Yoke Arm Covers 6
The Motherboard 8
The DMX/RS232 board 10
The Zoom/Focus board 11
2.1.2 YK50 Base 12
Removing the Base Covers 13
Connection Panel 13
2.2 YK50 - Compatible Projectors 15
2.2.1 LCD 7K: LX700 / LHD700 15
2.2.2 Modifications required 15

3: Projector Installation

3.1 LCD7K Lens Motor Replacement 17
3.1.1 Lens Removal 17
3.1.2 Lens Motor Set Replacement 18
3.2 The Bracket 20
3.2.1 Bracket Description 20
3.2.2 Installing the Projector on the Bracket 20
3.2.3 Lens Installation 21
3.2.4 Balancing the Projector 23
3.2.5 Making Electrical Connections 24

4: Operation

4.1 Pan and Tilt Movements 25
4.2 Setup 26
4.2.1 YK50 Flight Case 27
Description 27
Setup 27
4.2.2 System Power Up 27
Procedure 27
4.3 Truss Mounting 30
4.3.1 Integrated Rigging Clamps 30
4.3.2 Weights 31
4.3.3 Mounting Procedure 31

4.4 DMX 32
4.4.1 Controlling from a DMX Console or Controller 32
4.4.2 Control Panel 32
Description 32
YK50 Menu 33
4.4.3 YK50 DMX Protocol 40

5: Maintenance

5.1 Safety Warnings and Guidelines - General Precautions 43
5.2 Pre-Operational Checklist 43
5.3 Cleaning 44
5.3.1 Yoke 44
5.3.2 Projector 44
5.4 Lubrication - Chains 44
5.5 Serviceable Components 44
5.5.1 User-Serviceable 44
Yoke 45
Projector 45
5.5.2 Christie-Serviceable 45
Microchip 45
Fuses 46
Voltage Selector 47
Chain Tension 47

6: Troubleshooting

6.1 Yoke 49
6.1.1 User 49
6.1.2 Christie Accredited Technicians 50
6.2 Projector 51

7: Specifications

7.1 General Capabilities 53
7.1.1 Pan and Tilt Movements 53
7.1.2 Focus Control 53
7.1.3 Zoom Control 53
7.2 Physical 54
7.2.1 Yoke Dimensions 54
7.2.2 Yoke Body 54
7.2.3 Mounting Options 55
7.3 Weights 55
7.3.1 YK50 55
7.3.2 YK50 + LCD7K Projector 55
7.4 Power Requirements 55
7.4.1 Voltage and Current 55
7.4.2 Fuses 55

7.5 Flight Case 56
7.5.1 Dimensions 56
7.5.2 Weight 56
Empty 56
With YK50 + LCD7K Projector 56
7.6 Regulatory 56
7.6.1 Safety 56
7.6.2 Electro-Magnetic Compatibility 57
7.6.3 Environmental 57
7.6.4 Marking 57
7.7 Environment 57

1 Introduction

The Christie Nitro YK50 is an automated yoke designed exclusively for technicians with expertise in DMX technology and high power automated projectors.

⚠WARNING You must read this document in its entirety to ensure the Christie Nitro YK50 is installed and operated correctly. Failure to follow the instructions in this manual could result in personal injury or damage to the projector or the Christie Nitro YK50.

This product is also designed for temporary outdoor use, but must remain dry under all circumstances.

Servicing of this product may only be performed by Christie accredited service technicians.

1.1 Labels and Marking

Observe and follow any warnings and instructions marked on the Christie Nitro YK50 and throughout this manual.

⚠WARNING Warning symbols indicate a hazardous situation which, if not avoided, could result in death or serious injury.

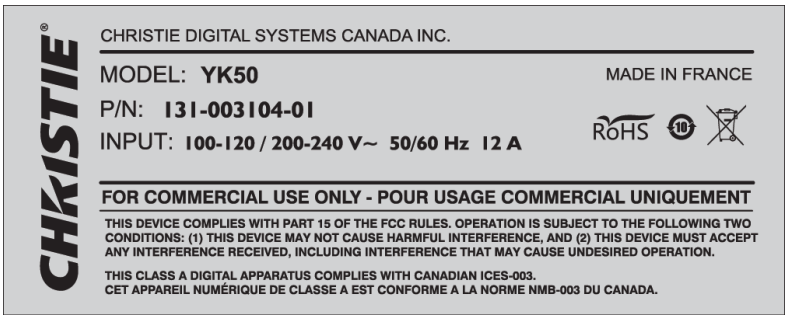
NOTICE! *Addresses practices not related to personal injury.*

1.2 General Features

The Christie Nitro YK50 is controlled by a DMX interface and offers these automated functions:

- 380° Pan powered by 24V DC servo motor – 16 bits,
- 270° tilt powered by 24V DC servo motor – 16 bits,
- Focus powered by 24V DC servo motors – 8 bits,
- Zoom powered by 24V DC servo motors – 8 bits

1.3 Input Rating


CHRISTIE
CHRISTIE DIGITAL SYSTEMS CANADA INC.
MODEL: YK50
MADE IN FRANCE
P/N: 131-003104-01
INPUT: 100-120 / 200-240 V~ 50/60 Hz 12 A
RoHS
FOR COMMERCIAL USE ONLY - POUR USAGE COMMERCIAL UNIQUEMENT
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
THIS CLASS A DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003.
CET APPAREIL NUMÉRIQUE DE CLASSE A EST CONFORME A LA NORME NMB-003 DU CANADA.

⚠WARNING Input Rating can be toggled between 115V and 230V with the voltage selector. Factory default setting of the voltage selector is 230V.

1.4 Safety Warnings

⚠WARNING All servicing must be performed by CHRISTIE accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.

⚠WARNING For protection from electric shock, the YK50 must be grounded (earthed) to protect against electrical shock and the AC power distribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.

⚠WARNING Disconnect the YK50 from AC power before removing any cover or part – including fuses – and when not in use. Covers shall only be removed by CHRISTIE accredited service technicians.

⚠WARNING Isolate the YK50 from power immediately if any power connector, power cable, seal, cover or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reconnect power until repairs have been completed and unit is completely dry.

⚠WARNING Do not expose the YK50 to rain or moisture.

This symbol appears in this manual for procedures where a Pinching or Crushing hazard between chain and sprocket exists. Keep hands clear when unit is powered. Disconnect power before servicing.

This symbol appears in this manual for procedures where a Pinching or Crushing hazard between rotating and stationary surfaces exists. Keep hands clear when unit is powered. Disconnect power before servicing.

This symbol appears in this manual for procedures where a tipping hazard exists. Ensure equipment has been secured before proceeding with the next step in the process.

1.4.1 Fuse Replacement

⚠WARNING Disconnect the YK50 from power before replacing a fuse. Replace fuses with ones of the same type and rating. Never bypass or bridge a fuse. Covers shall only be removed by CHRISTIE accredited service technicians.

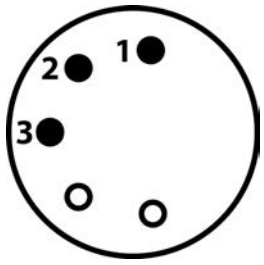
The YK50 is protected by three fuses:

- T1.6A time delay (250V) located on the power supply board (Conquer Electronics Co., Ltd # UTE1.60)
- T6.3A time delay (250V) located in the transformer inline fuse holder (Schurter AG # 0034.3125)
- FA 12.5A (250V) located in the connector panel fuse holder. (Mersen #X084315P)

1.4.2 Pre-operational Checklist

Before you operate the Christie Nitro YK50, check these items:

- Verify that the voltage selector is properly set (115V or 230V) for the zone in which it operates.
- Verify that the power cable connector is locked to the yoke base.
- Verify that the green LED is flashing on the control panel. This indicates that the yoke is receiving a DMX signal.
- Verify that the connections between the projector and the yoke are correct.
- Verify that the yoke and projector lens will not collide with other objects.
- Verify that the screws on the bracket are tight after balancing the projector.
- Verify that the lens is properly mounted and locked after replacing zoom and focus motors.
- Verify that the yoke is properly grounded.
- Verify that the AC power complies with the local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Verify that all power distribution equipment and cables are in good condition and rated for the requirements of the connected devices.
- Verify that the DMX distribution has XLR 5 pin connectors.



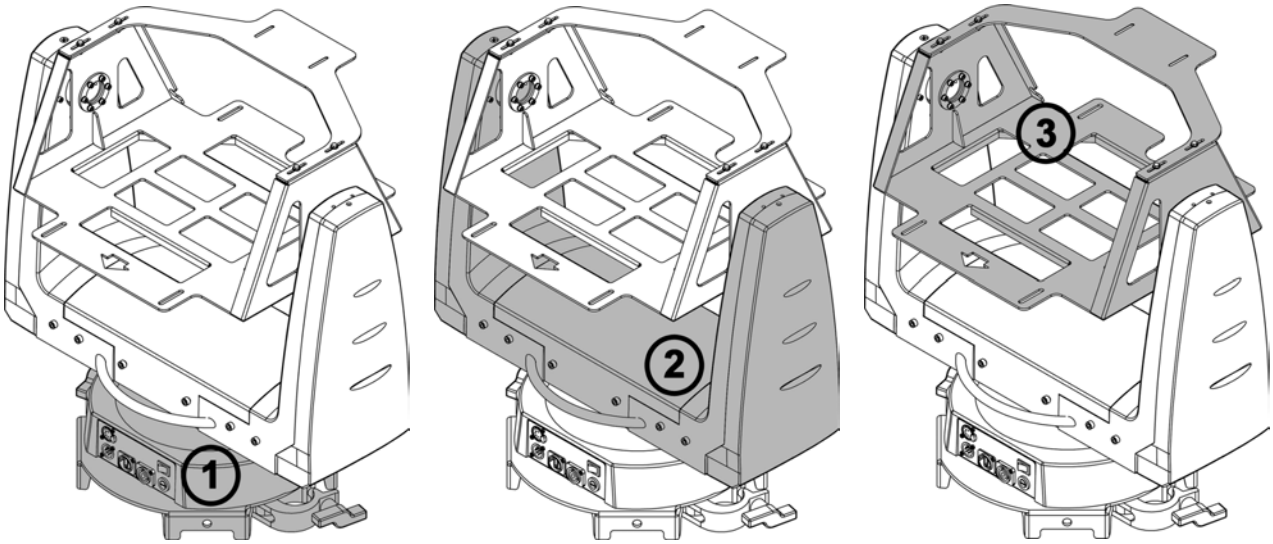
PIN	FUNCTION
1	Ground
2	Signal -
3	Signal +

2 Overview

2.1 YK50 Dual Arm Yoke

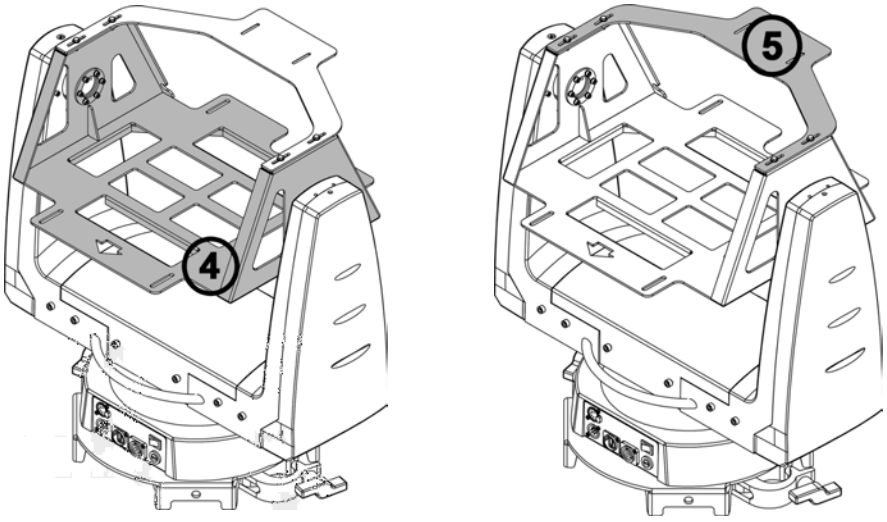
The YK50 is comprised of the following main components:

- The base (1)
- The dual arm (2)
- The bracket (3)



The YK50 bracket assembly contains these components:

- The platform (4).
- A safety belt (5), which is also used for balancing the video projector.

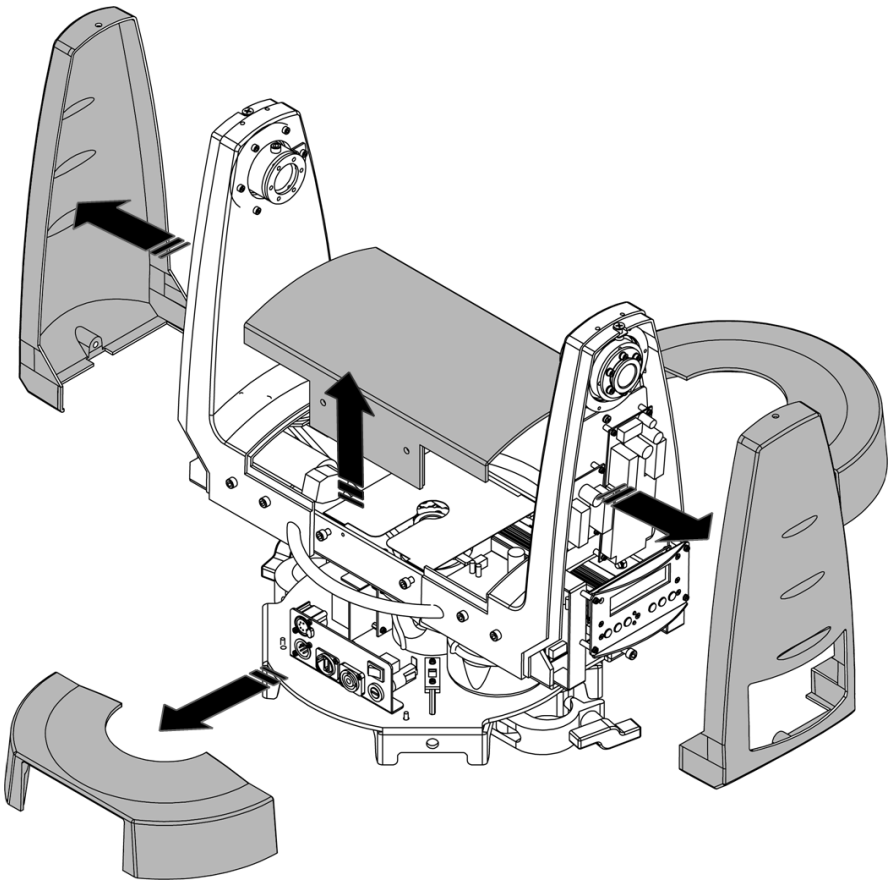


2.1.1 YK50 Dual Arm Description

The YK50 dual arm contains these components:

- Pan and tilt motors
- Pan and tilt sensors
- Motherboard
- Zoom/focus boards
- DMX/RS232 boards
- Display/control panel. See *4.4.2 Control Panel*

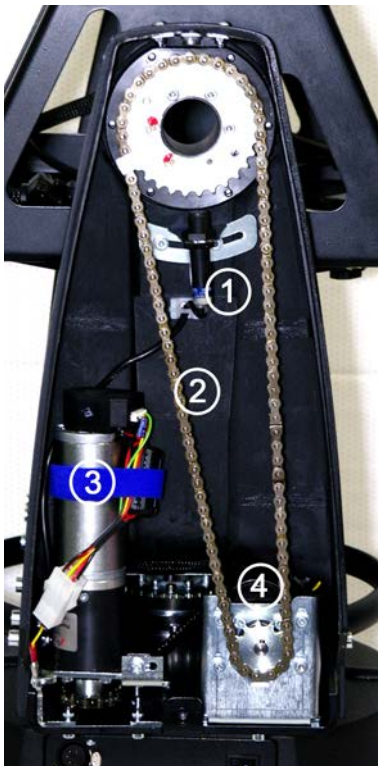
Removing the Yoke Arm Covers

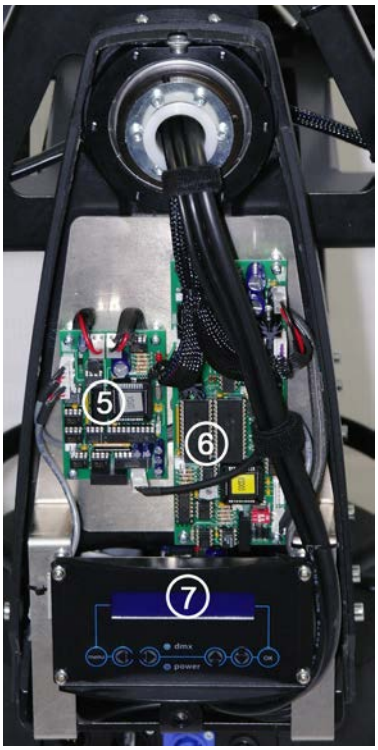


⚠WARNING All installations and servicing must be performed by Christie accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.

1. Remove 2 screws from the vertical covers on both ends of the arm. This provides access to the components.

⚠WARNING The covers should always be in place and secured before switching projector power to ON.





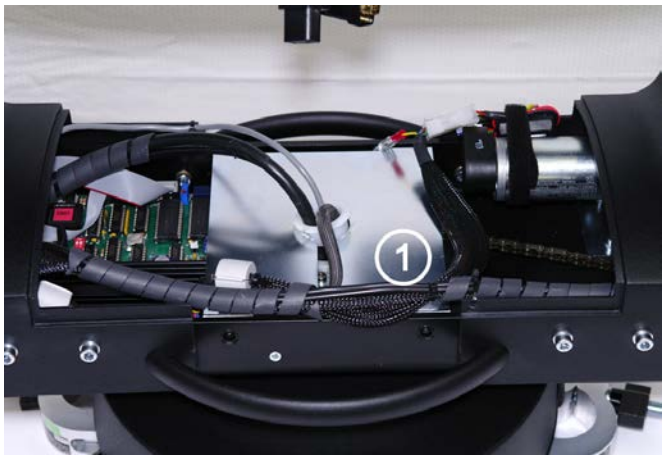
ARM #1 COMPONENTS

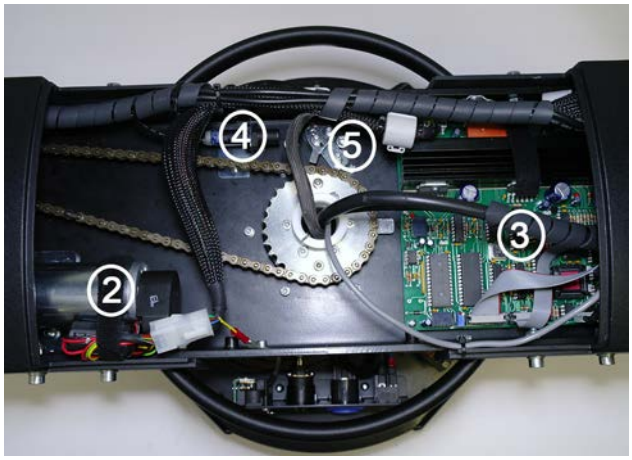
1- Tilt sensor
2- Tilt chain
3- Pan motor
4- Tilt motor

ARM #2 COMPONENTS

5- DMX/RS232 board
6- Zoom/focus board
7- Display/control panel

2. Remove 4 screws from the horizontal cover to access the components shown below.





1 -Protection plate

2 - Tilt Motor

3 - Motherboard (CPU)

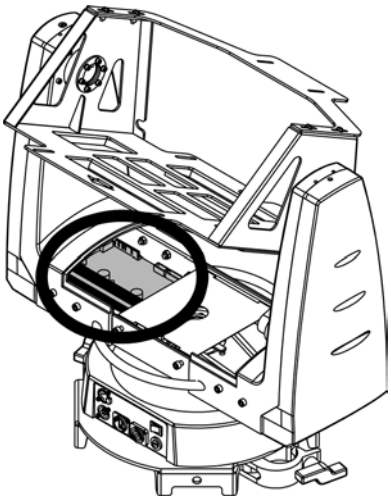
4 - Pan Sensor

5 - Pan Detector

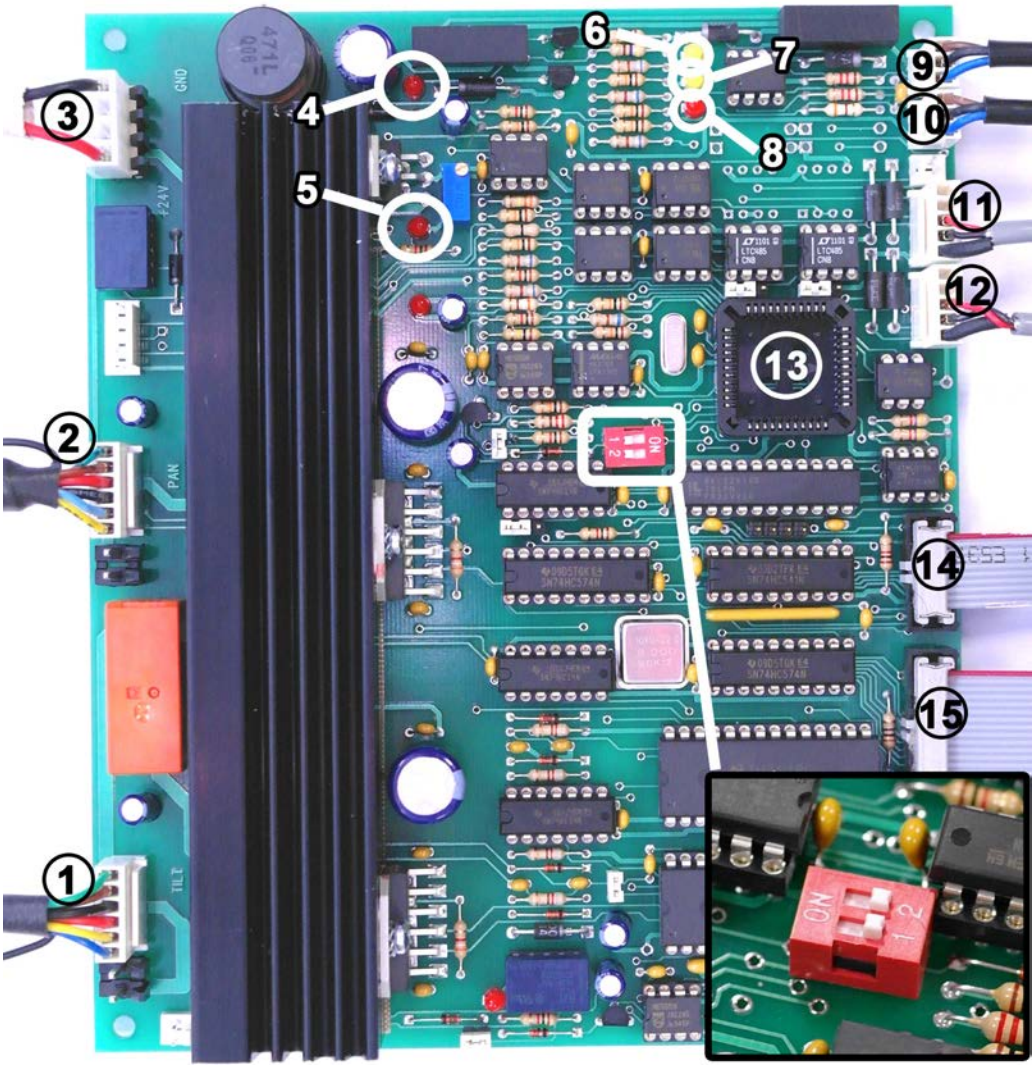
⚠WARNING Disconnect the YK50 Yoke from AC power before removing any cover or part including fuses – and when not in use. Covers shall only be removed by Christie accredited service technicians.

The Motherboard

All the functions and characteristics of the yoke and projectors are managed by a microchip located on the motherboard. All software upgrades are implemented by changing the microchip installed on the motherboard. (See *5.5 Serviceable Components*)



⚠WARNING All installations and servicing must be performed by Christie accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.



NOTICE! *The DIP switches do not affect projector operation, but must both be set to* OFF *position.*

ITEM	DESCRIPTION
1	Tilt motor connector
2	Pan motor connector
3	Power connector
4	Red strike LED
5	Red 5V CPU power LED
6	Yellow pan detection LED
7	Yellow tilt detection LED
8	Red unused LED
9	Tilt sensor input connector

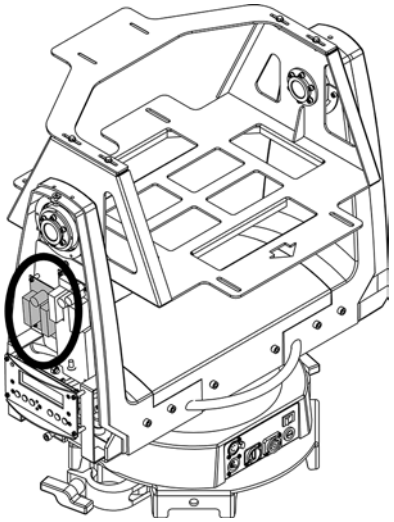
ITEM	DESCRIPTION
10	Pan sensor input connector
11	DMX output connector
12	DMX input connector
13	Micro chip slot
14	Display connector
15	Control panel connector

The DMX/RS232 board

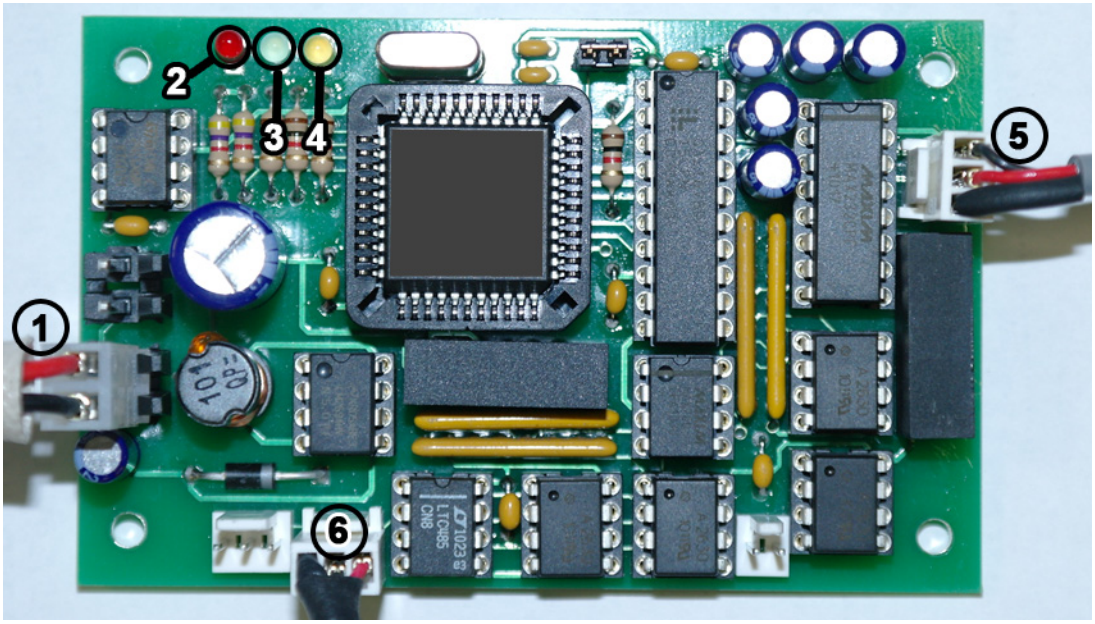
The DMX/RS232 interface board allows some projector functions to be controlled directly from any lighting desk.

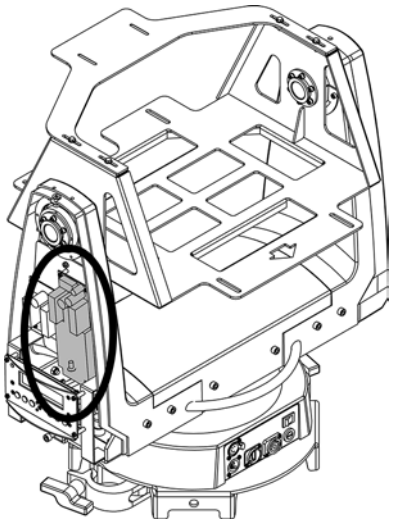
Channel #7 of the DMX protocol includes all these functions.

(See *4.4.3 YK50 DMX Protocol*).



ITEM	DESCRIPTION
1	Power connector
2	Red 5V power LED
3	Green DMX reception LED - Flashing=DMX signal ok
4	Yellow RS232 transmission LED
5	RS232 connector
6	DMX input connector



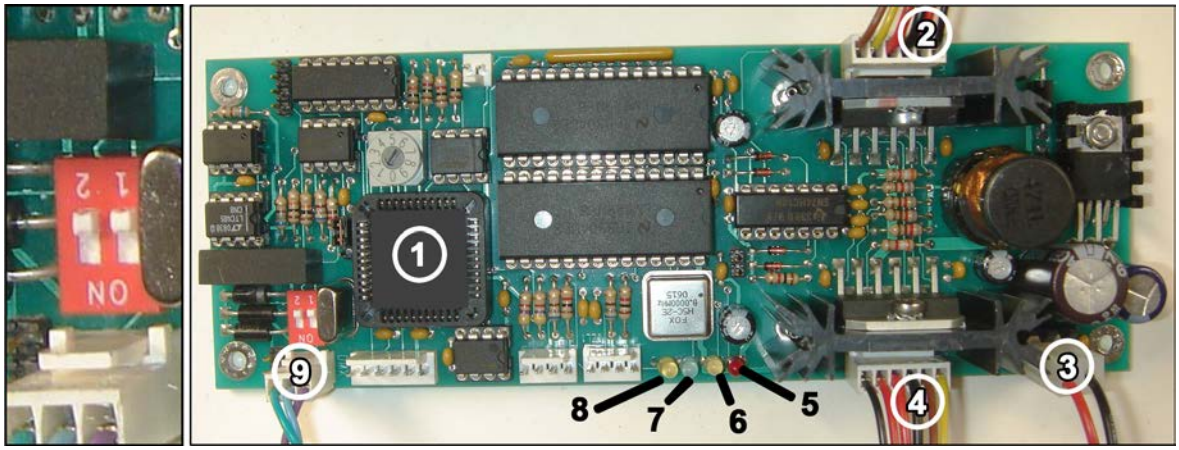


The Zoom/Focus board

The zoom/focus board drives, the additional zoom/focus module installed on the LX1500 directly from the lighting desk.

DMX channel #8 controls zoom and DMX channel #9 controls focus

(See *4.4.3 YK50 DMX Protocol*).



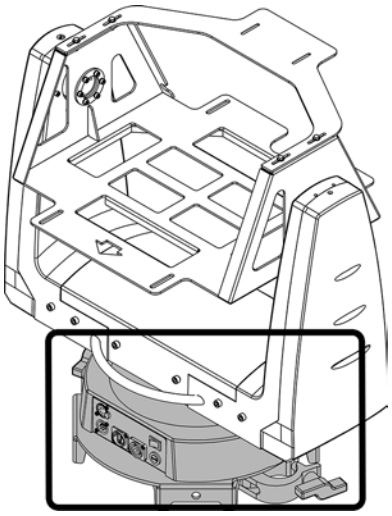
ITEM	DESCRIPTION
1	Removable chip
2	Zoom output/zoom “Z” connector
3	Power input connector
4	Focus output/focus “F” connector
5	Red power LED
6	Yellow zoom reset LED
7	Green DMX reception LED - Flashing=DMX signal ok
8	Yellow focus reset LED
9	DMX input connector

2.1.2 YK50 Base

The YK50 base contains these components:

- Power supply components
- Power and DMX Connectors
- Video Connectors

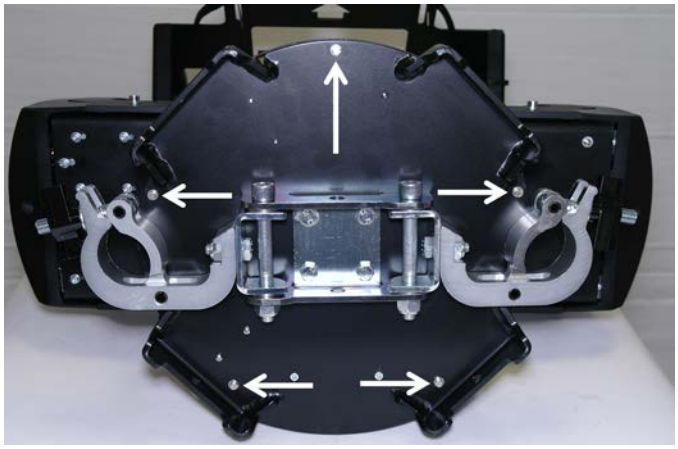
⚠WARNING The covers should always be in place and secured before switching projector power to ON.

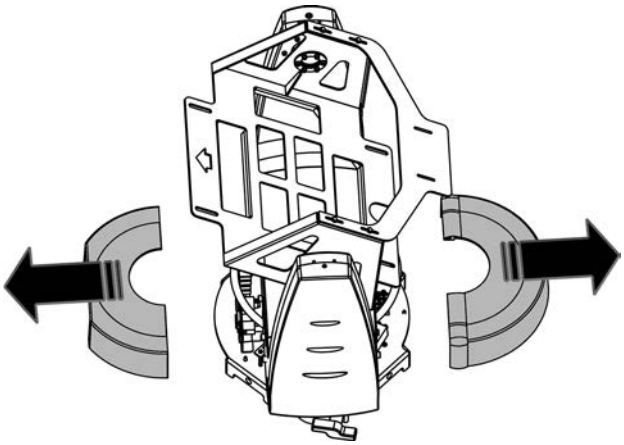


⚠WARNING All installations and servicing must be performed by Christie accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.

Removing the Base Covers

To remove the base covers remove the 5 screws securing the covers to the base frame.



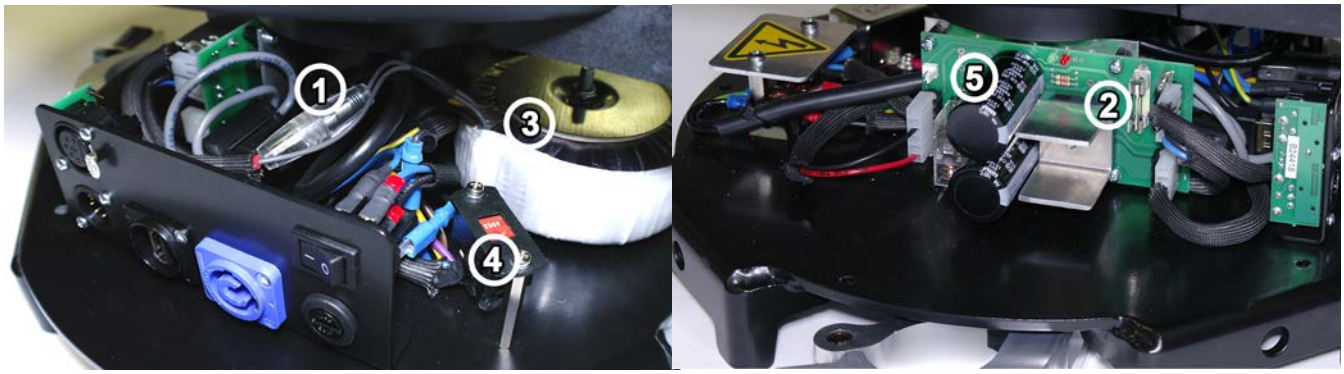


Connection Panel

⚠WARNING Disconnect the YK50 Yoke from AC power before removing any cover or part including fuses – and when not in use.

⚠WARNING Covers shall only be removed by Christie accredited service technicians.

ITEM	DESCRIPTION
1	DMX input
2	DMX output
3	HDMI input
4	Powercon 20A power supply connector
5	Power switch
6	Input fuse holder
7	Voltage selector window



ITEM	DESCRIPTION
1	Secondary fuse
2	Primary fuse
3	Transformer
4	Voltage selector
5	Power supply board

⚠WARNING Check the voltage selector is properly set for the zone in which it operates (115V or 230V). Factory default setting of the voltage selector is 230V.

DESCRIPTION	VOLTAGE RANGE		FUSE PROTECTION
Power Supply Transformer (150 VA)	Primary	115-230 V	T1.6A (250V) - Use only Conquer Electronics Co., Ltd # UTE1.60
	Secondary	22 V	T6.3A (250V) - Use only Schurter AG # 0034.3125
AC Input	Input Fuse Holder	115V Or 230V	FA 12.5 – Use Only Mersen # X084315P

2.2 YK50 - Compatible Projectors

2.2.1 LCD 7K: LX700 / LHD700

LCD7K video projectors can be mounted to the YK50 with a special bracket.

Some minor modifications are required to interface with the YK50, but all LCD 7K video projector features and functions are unchanged.

2.2.2 Modifications required

Zoom and focus motors on the LCD7K lens must be replaced with the YK50 Zoom/Focus module motors. DMX protocol is used to control these motors.

3 Projector Installation

3.1 LCD7K Lens Motor Replacement

To implement lens zoom and focus control from the DMX console, it will be necessary to replace the projector lens motors.

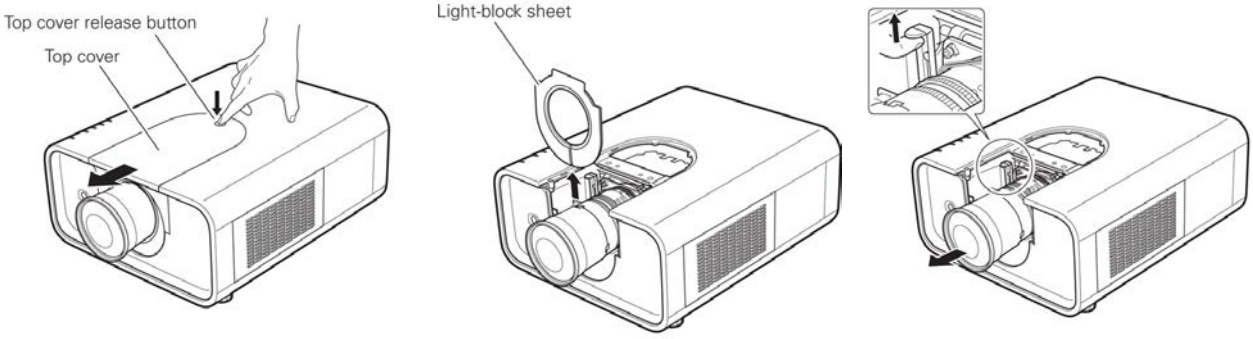
⚠WARNING Do not touch or remove any parts except those that are documented in the procedure. Malfunctions, electrical shock, fire hazard or other accidents may result.

NOTICE! *When moving or setting up a projector, ensure the lens cap is in place to prevent damage to the lens surface. Do not subject the lens to force and do not lift the projector by the lens. The actions can result in damage to the lens, cabinet or mechanical components.*

3.1.1 Lens Removal

1. Shift the lens to the center position by using the lens shift function.
2. Turn off the projector and unplug the AC power cord.
3. While pressing the top cover release button on the top cover, slide the top cover toward front to remove it.
4. Slide the light-block sheet upward and remove it.
5. Hold the lens with one hand and pull the Lens Lock Lever upward with the other hand. Remove the lens from the projector.

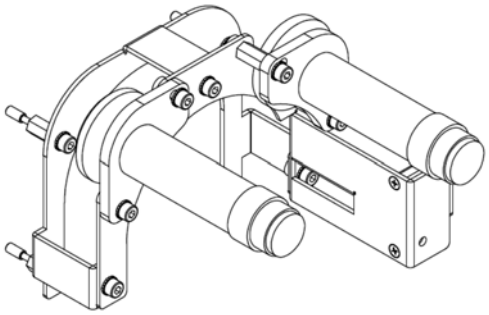
NOTICE! *Do not touch the glass part of the lens with your hand.*

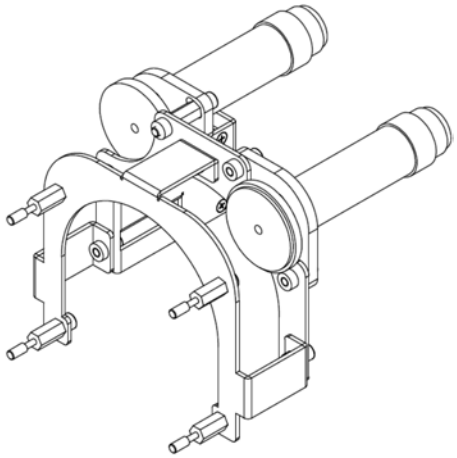


3.1.2 Lens Motor Set Replacement

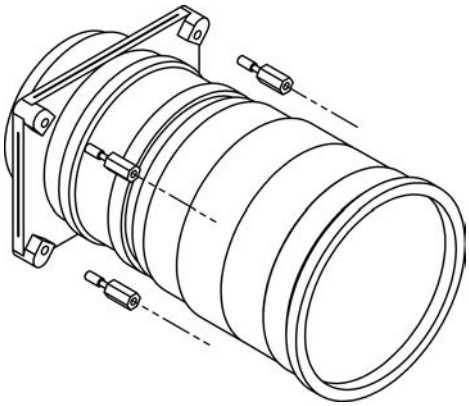
NOTICE! *All original screws must be set aside for re-use.*

1. Remove the original motor set from the lens.

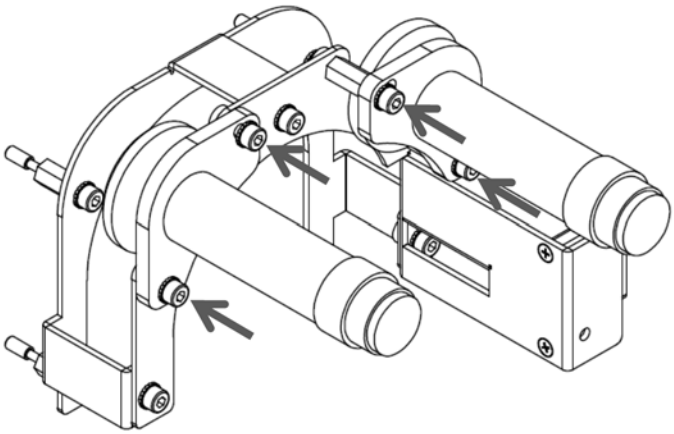




2. Install the provided spacers on the lens holder.



3. Loosen the screws at the locations shown below to unlock the motor position adjustments.



4. Mount the motors to the 4 spacers previously installed on the lens holder.

NOTICE! *Ensure the lens orientation is correct, as shown in the photo (right).*

5. Allow the motor gears to mesh with the lens gears.

NOTICE! *DO NOT apply additional pressure on the gears in an effort to mesh them.*

6. Inspect the motor gears to ensure they are meshed with the lens gears. Tighten the motor position adjustment screws loosened earlier (photo-right).

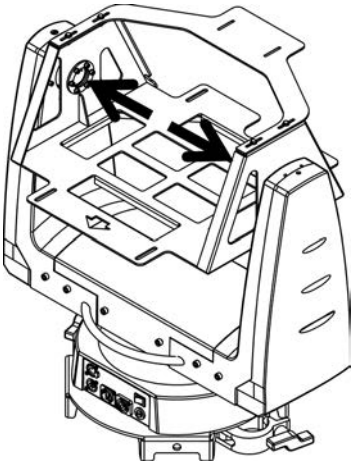
7. Carefully rotate the lens gears and verify that the motor gears are rotating. If gear operation is satisfactory, the lens is ready for installation.
8. Install the lens fitted with the new motor into the LCD7K.

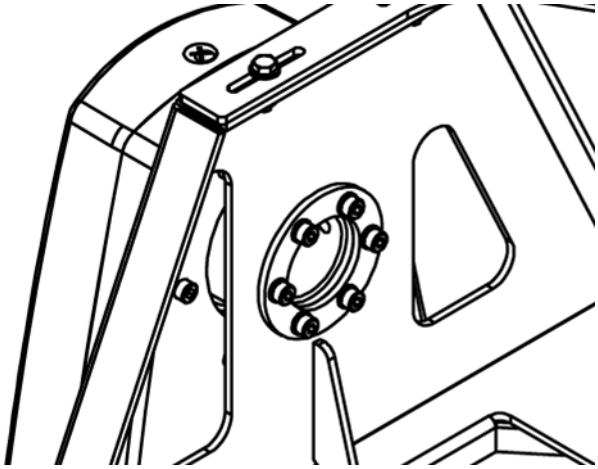
NOTICE! *The light-block sheet cannot be re-installed. See illustration in* *3.1.1 Lens Removal on page 17.*

3.2 The Bracket

3.2.1 Bracket Description

The projector is mounted on a unique video head, or bracket. On occasion, it may be necessary to remove the bracket from the YK50. It can be quickly mounted on or dismounted from the YK50 Yoke by removing the 6 screws on each side.



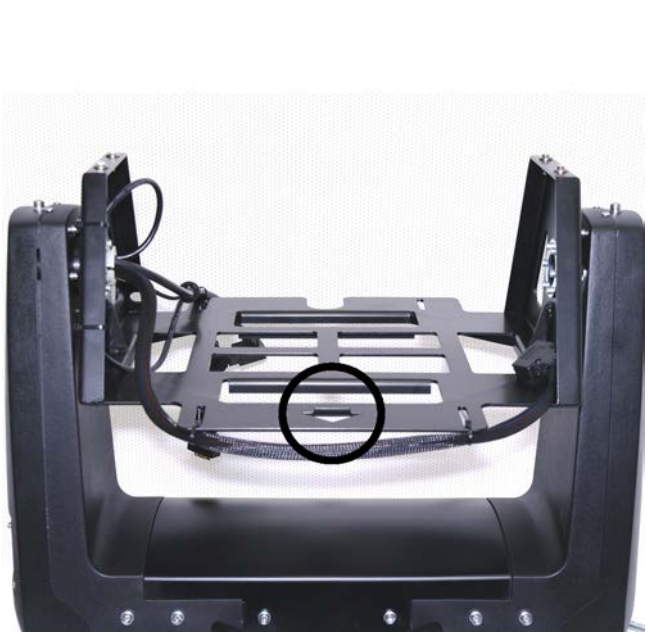


3.2.2 Installing the Projector on the Bracket

The bracket includes a mark (arrow) which indicates the projector lens side.

1. Place the projector into the bracket.

NOTICE! *Ensure that no cables are caught between the bracket and the projector.*



2. Attach the projector using the hardware provided:
   - CHC 6x12 + flat washer d6D24 + lock washer

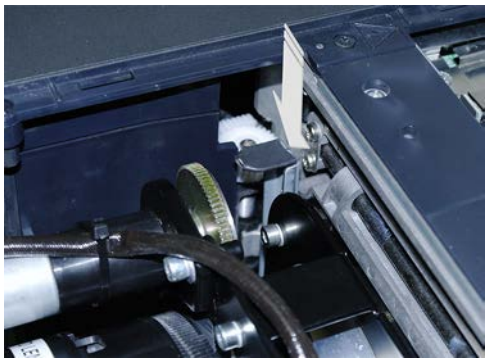
NOTE: *Balance adjustment depends on the lens used, and is not performed at this point.*

3.2.3 Lens Installation

NOTICE! *Before lens installation, remove rear lens cap.*

1. Align the tabs on the lens with the slots in the lens retainer ring on the projector.
2. Push the lens in until the tabs touch the back of the retainer ring.

3. Push the Lens Lock Lever downward. Make sure that the lens is properly locked.



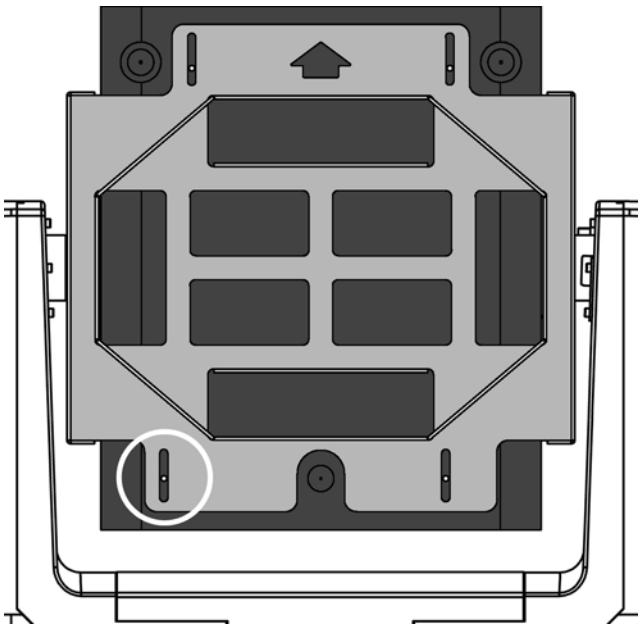
4. While pressing the top cover release button, slide the cover onto the projector.

3.2.4 Balancing the Projector

Depending upon the choice of lens used on the projector, the balance adjustment will vary. Balance is achieved by adjusting the projector horizontal position.

NOTICE! *Ensure the lens is installed before proceeding.*

1. Adjustments are made by slightly loosening the 4 screws that hold the projector to the bracket. The projector is moved on its bracket for final balancing.The range of adjustment is provided by the slots in the bracket.



NOTICE! *With the YK50 power turned off, balance is only achieved when the projector does not tilt on its own when set to tilt angles of 0°, 45° and 90°. As a result, it may be necessary to perform the balance adjustment more than once until this is achieved.*

2. When all balance adjustments have been completed, lock all 4 blocking screws.

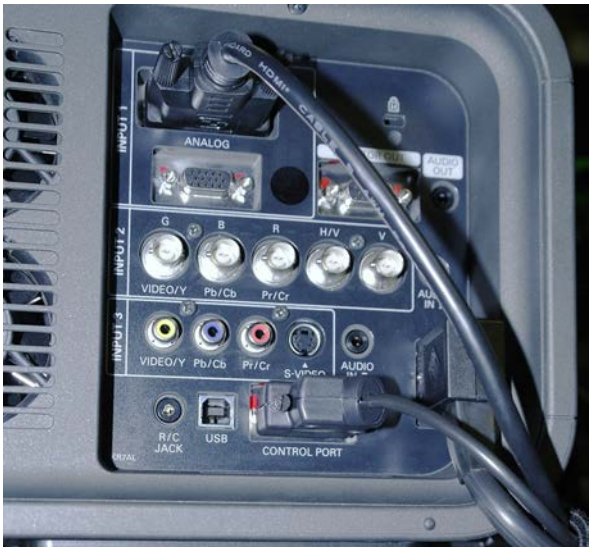
3.2.5 Making Electrical Connections

WARNING: All installations and servicing must be performed by Christie accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any other part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.

4 connectors must be attached to the projector:

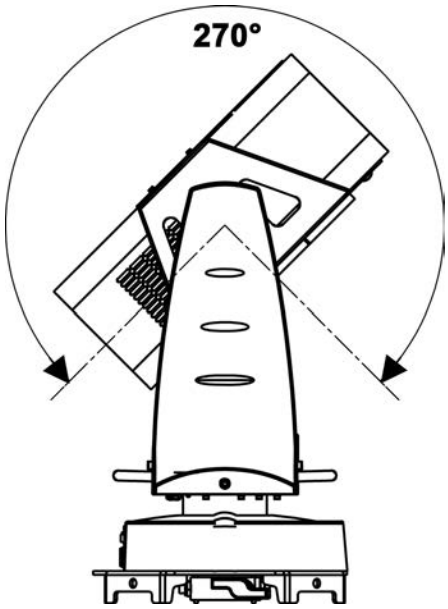
ITEM	DESCRIPTION
1	LCD7K Power supply cable
2	DVI cable
3	RS232 cable
4	Zoom/focus module cable

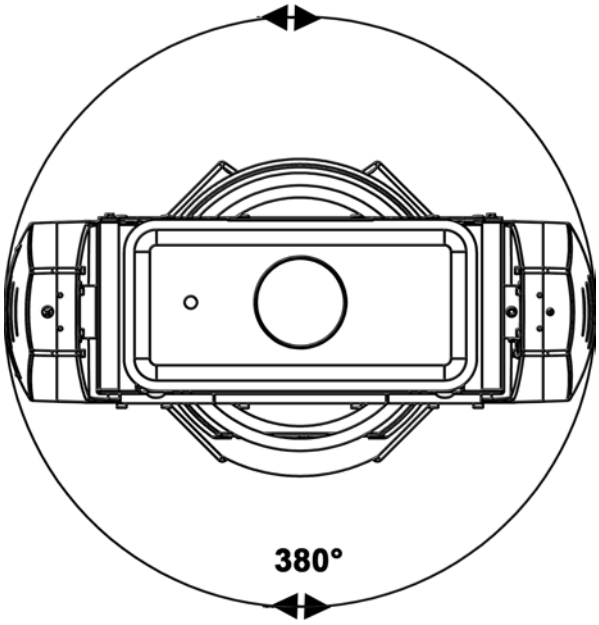
1. Route the 3 rear cables (power, RS232 and video) between the bracket and the LCD7K.
2. Make the connections on the LCD7K rear terminal and to the lens motors set.



4 Operation

This section provides information and procedures for operating the YK50 yoke.





4.1 Pan and Tilt Movements

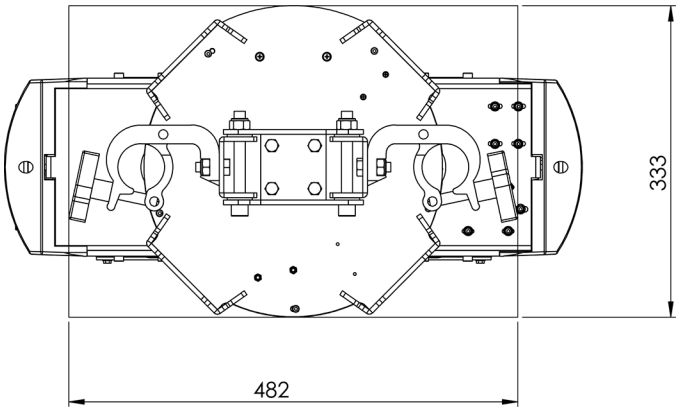
The YK50 allows a projector to be remotely oriented from a DMX console, using both pan and tilt motion. Pan can be implemented through a full 380° range, while tilting operates over a 270° range.

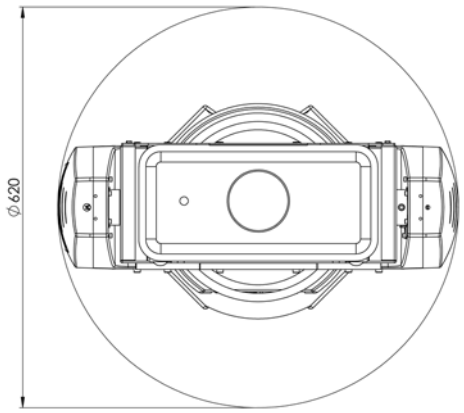
NOTICE! *The motherboard CPU automatically shuts down motor power when pan or tilt movements encounter any kind of physical resistance. This automatic safety feature can only be defeated by removing the source of resistance and sending a new command from the DMX control console.*

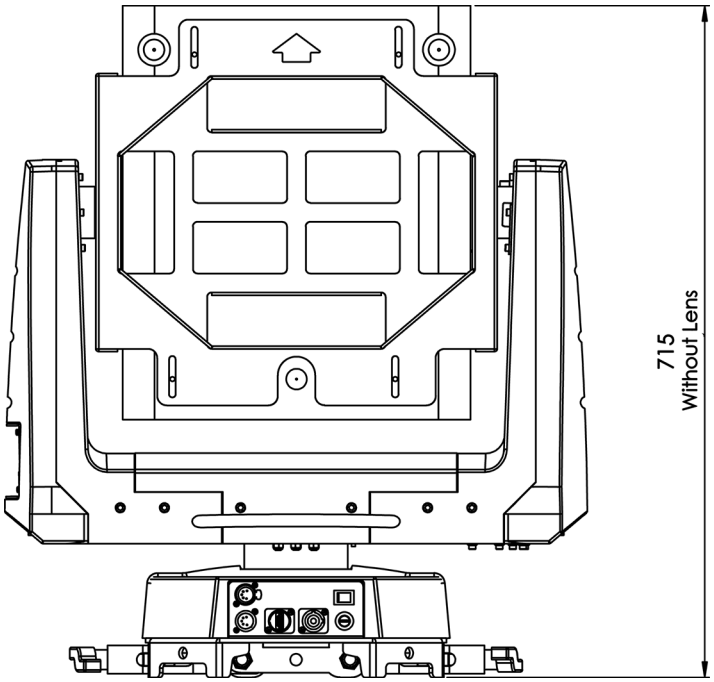
4.2 Setup

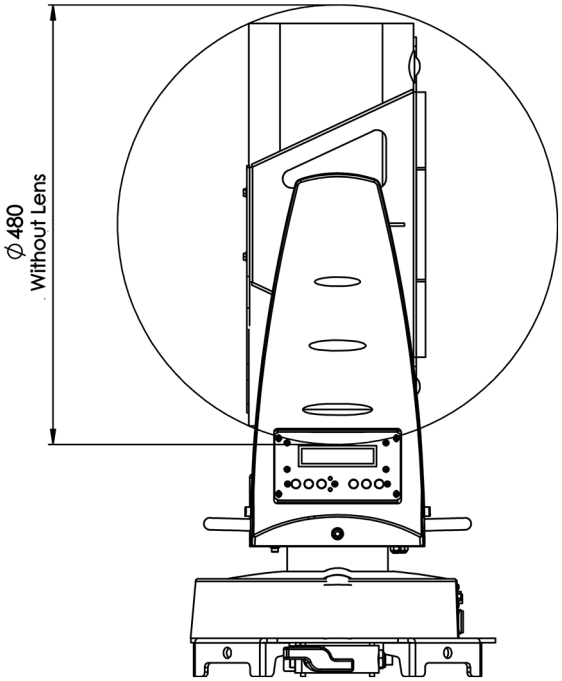
The stability of the YK50 base should always be checked and the strength of the platform needed to support it should never be underestimated. The momentum generated by pan and tilt movements should also be taken into account. The average surface area of the platform needed is 0.60m x 0.60m (24”x24”). The YK50 footprint and clearances (without lens) are shown below.

Secure the YK50 to the mounting surface when no projector is installed on the yoke to prevent a tipping hazard.









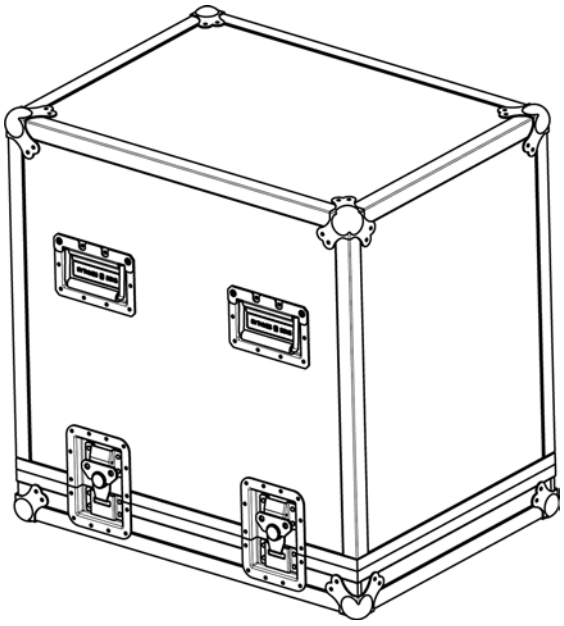
.

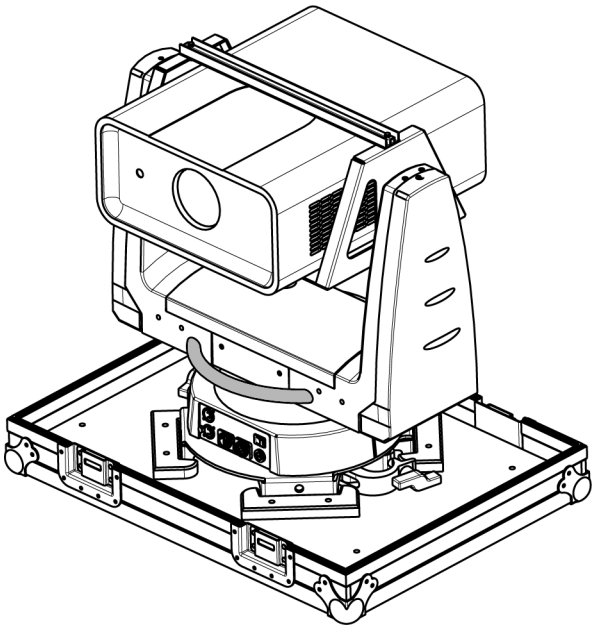
4.2.1 YK50 Flight Case

Description

The flight case provides a means of safely transporting the YK50 with a pre-mounted projector. It also simplifies setup and packing.

NOTICE! *The projector should never be shipped with a lens installed, as this could result in damage to the lens or the lens mount.*





Setup

Remove flight case cover by undoing latches and using the 2 handles to expose the YK50.

NOTICE! *To move the flight case over long distances, wheels on the flight case should be used.*

4.2.2 System Power Up

⚠WARNING This operation must be managed only by service person.

⚠WARNING In order to disconnect both yoke and projector from the power source in an emergency, it will be necessary to pull the power plug from the power source receptacle.

Procedure

1. Complete this checklist:
   - Verify that voltage selector is properly set (115V or 230V) for the zone in which it operates. If the voltage selector is not on the proper setting please refer to section 5.5.2.

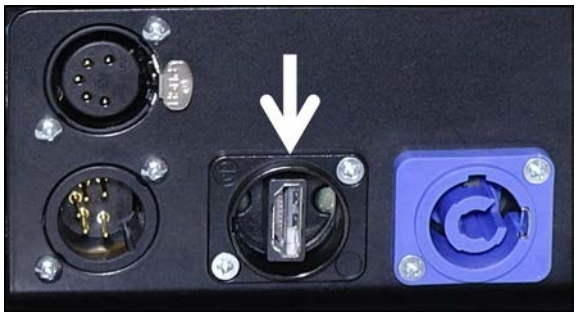
- Verify that the correct power cable is selected:

1	Europe	P17 230V 16A Single Phase
2	North America	Twist Lock115V 15A Single Phase

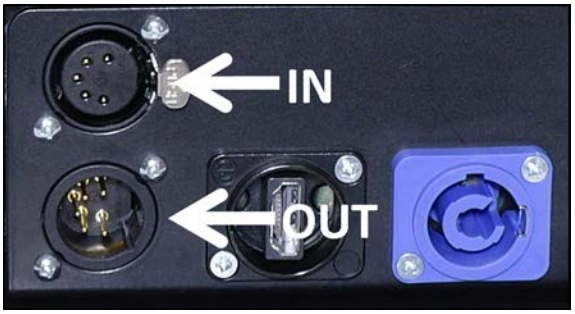
- Verify that power is available near the YK50 installation location.
- Verify that YK50 is properly grounded (earthed) and ground fault protection is functioning.
- Verify that power cables are undamaged.
- Verify that the YK50 power switch is in the OFF position.

2. Plug in the power cable.
3. Attach the power cable to the YK50 and lock the connector.

4. Connect an HMDI cable from the video source to the input panel.



5. Connect the DMX 5 pin XLR connectors to the power panel.



NOTICE! *The YK50 should always be connected to DMX data using star topology, strictly following DMX standard instructions.*

⚠WARNING Never switch on the projector and yoke at the same time.

6. Switch on the projector.

⚠WARNING Always ensure personnel are not close to the YK50 at startup.

7. Turn on the main YK50 power switch. The unit will start its pan and tilt reset. Wait for the reset to complete.

NOTICE! *The main YK50 power switch only switches on the yoke components (motors and electronic boards). The projector power switch is independent of the yoke.*

8. Check the LCD Panel on the base. Both the **dmx** and **power** LEDs on the Display LCD panel should be lit.

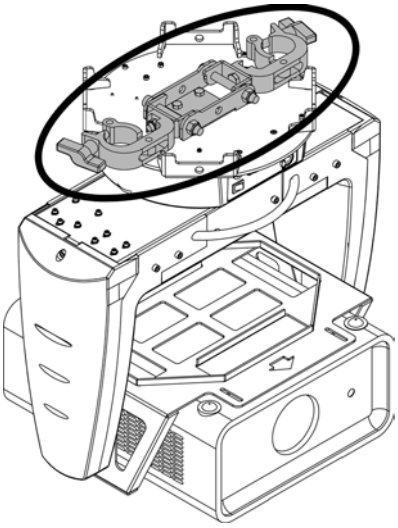
NOTICE! *A green flashing* **DMX** *LED indicates that a DMX signal is being received.*

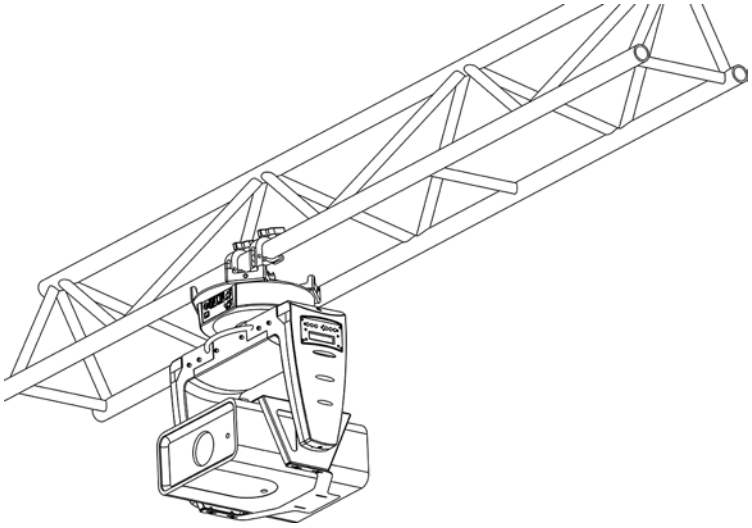
⚠WARNING Always wait until the reset process is complete before switching on the next YK50 and projector system.

4.3 Truss Mounting

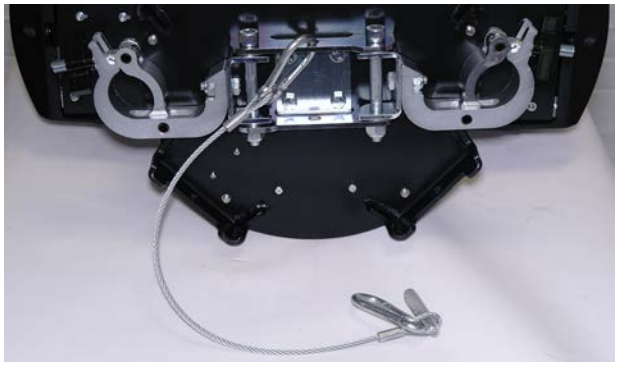
4.3.1 Integrated Rigging Clamps

The integrated rigging clamps provide a means of attaching the YK50 to any type of truss. They can be fixed under trusses ranging from 300mm (11.8”) to 500mm (19.7”) wide with 50mm (2”) section tubes and are designed to support a weight of 150 Kg (331 lbs)





One removable safety ring is also integrated with the bottom of the base to allow the projector to be secured with a safety cable.



4.3.2 Weights

Verify your lifting equipment has an adequate weight rating to lift the yoke:

YK50+LCD7K w/o lens: 36 kg (79 lbs)

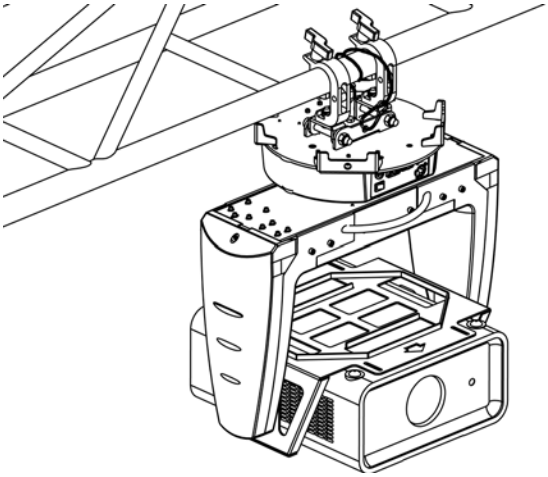
4.3.3 Mounting Procedure

1. Remove flight case cover and locate yoke below truss.

NOTICE! *To move the flight case over long distances, wheels on the flight case should be used.*

2. Extract clamps from the base and open them.
3. Hang the YK50 to the truss and lock the clamps.
4. Secure the YK50 with the safety cable.

NOTICE! *Before lifting the truss, check that all connections have been made to the projector and that the YK50 power switch is on. Failing to do so will require lowering the truss again to rectify these conditions.*



4.4 DMX

The YK50 yoke is DMX controlled according to USITT standards.

4.4.1 Controlling from a DMX Console or Controller

The DMX512 protocol used to control the YK50 yoke adheres to United States Institute for Theatre Technology (USITT) standards. You can use any DMX console or controller that complies with these standards to control the YK50 yoke.

If you are using DMX star topology, use XLR 5 pin connectors for all connections. In addition, use a shielded twisted-pair cable designed for RS-485 devices. Do not use microphone cable or other cable with characteristics different from the EIA RS-485 specifications. It is recommended that you use double pair shield cabling.

4.4.2 Control Panel

Description

The YK50 yoke control panel has 6 keys to provide navigation through various menus:

- The **menu** key returns the display to the **Welcome Menu**
- The ▶ key allows scrolling through main menu items and between submenu items
- The ◀ key also allows scrolling through main menu items and between submenu items, but in the reverse sequence to the ▶ key.
- The ▲ key allows increasing the value of a parameter.
- The ▼ key allows decreasing the value of a parameter.
- The **OK** key allows to enter a submenu or to validate a setup.

When switching on, the LCD display indicates the product software version. This is displayed for one second, then the **Welcome Menu** appears.

All the functions and characteristics of the yoke and projectors are managed by a microchip located on the motherboard. All software upgrades are implemented by changing the microchip installed on the motherboard.

Refer to section *5.5.2* for service instructions for microchip replacement.

PROJECTOR	VERSION
LX700	Refer to christiedigital.com for the latest version

YK50 Menu

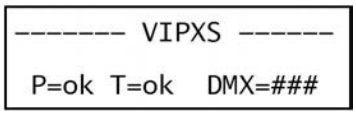
When using a LCD7K projector with the YK50, these menus are available:

- **Welcome** menu
- **DMX Address modification m**enu
- **DMX Channel Visualization** menu
- **Test Program** menu
- **General Configuration** menu
- **System Command** menu
- **Video Command menu**
- **Information System** menu

For an overview of the menu structure, refer to the menu tree at the end of this subsection.

Welcome Screen

This menu displays the machine status when searching for home positions.

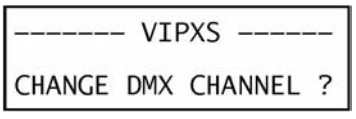


Question marks (?) indicate that the system is calibrating the pan and tilt motors. When both pan and tilt home positions are found, the menu indicates ok. The DMX address or the machine number is displayed.

Selecting a Menu

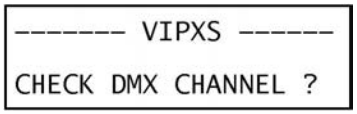
After the **Welcome** menu appears, press the ▶ or ◀ key to select the following main menu items. Once inside a main menu item, however, the **menu** key must be pressed first in order to select a different main menu with the ▶ or ◀ keys.

DMX Address Modification Menu

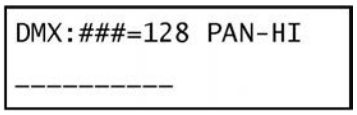


1. From the **Welcome menu**, press ▶ once to select this menu item.
2. Press the **OK** key to change the DMX address.
3. Press the ▲ key to increase channel number.
4. Press the ▯ key to decrease channel number.
5. Hold down the ▲ or ▯ key to scroll quickly.
6. Press **OK** to validate this number.
7. Press **menu** to return to the **Welcome** menu.

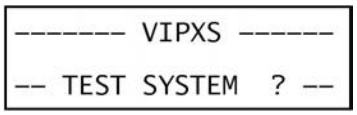
DMX Channel Visualization Menu



1. Press the ▶ or ◀ key to select this menu item.
2. Press the **OK** key to access the DMX screen.
3. Press the ▲ or ▼ keys to review the DMX values for each channel
4. Press **menu** to return to the **Welcome** menu.

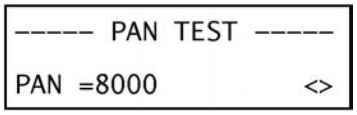


Test Program Menu



1. Press the ▶ or ◀ key to select this menu item.
2. This menu has 6 submenus. Press the **OK** key to enter the first submenu:

Pan Test Submenu

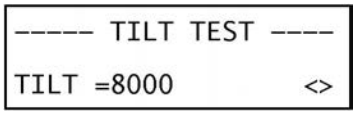


1. Press the ▲ key to run the motor counterclockwise (as viewed from above).
2. Press the ▼ key to run the motor clockwise.

The LCD display indicates the coding point value of stripe converters in Hex mode (500 steps for 1 motor cycle).

3. Press the ▶ or ◀ key to select the next submenu.

Tilt Test Submenu

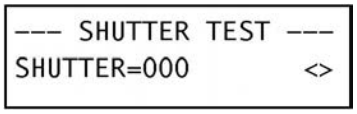


1. Press the ▲ key to run the motor clockwise (as viewed from yoke arm side).
2. Press the ▼ key to run the motor counterclockwise.

The LCD display indicates the coding point value of stripe converters in Hex mode (500 steps for 1 motor cycle).

3. Press the ▶ or ◀ key to select the next submenu.

Shutter Test Submenu

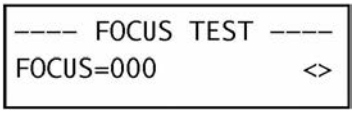


1. Press the ▲ key to increment the value of the parameter.
2. Press the ▼ key to decrease the value of the parameter.

Holding the ▲ or ▼ key will quickly scroll through the range 0-255.

3. Press the ▶ or ◀ key to select the next submenu.

Focus Test Submenu



1. Press the ▲ key to increase the value.
2. Press the ▼ key to decrease the value.

Holding the ▲ or ▼ key will quickly scroll through the range 0-255.

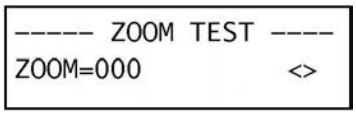
3. Press the ▶ or ◀ key to select the next submenu.

Zoom Test Submenu

1. Press the ▲ key to increment the value of the parameter.
2. Press the ▼ key to decrease the value of the parameter.

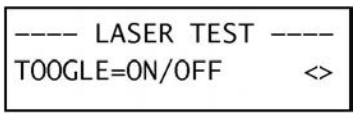
Holding the ▲ or ▼ key will quickly scroll through the range 0-255.

3. Press the ▶ or ◀ key to select the next submenu.



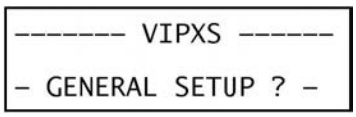
Laser Test Submenu

1. Press the ▲ or ▼ key to toggle ON & OFF the Laser diode.
2. Press the ▶ or ◀ key to select the next submenu.



General Setup Menu

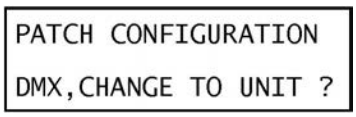
1. Press the ▶ or ◀ key to select this menu item.
2. This menu has 2 submenus. Press the **OK** key to enter the first submenu:



Patch type Submenu

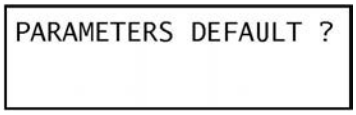
Allows you to address the YK50 with **DMX** channels or with **UNIT** number.

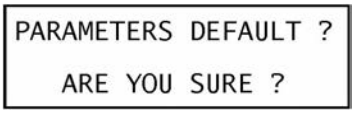
1. Press the **OK** key to change from **DMX** to **UNIT** patch configuration.
2. Press the ▶ or ◀ key to select the next submenu.



Default Parameters Configuration Submenu

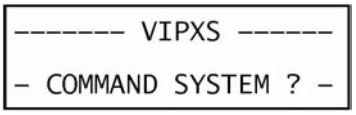
1. Press the **OK** key to restore the default parameters. The default parameter is DMX Channels address setting.
2. The confirmation message ARE YOU SURE? appears.
3. Press the **OK** key to confirm. The **Welcome** menu appears.





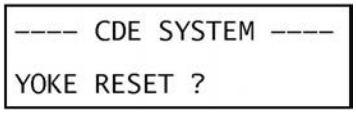
Command System Menu

1. Press the ▶ or ◀ key to select this menu item.
2. This menu has 5 submenus.
3. Press the **OK** key to enter the first submenu, then ▶ or ◀ to navigate between submenus if desired:

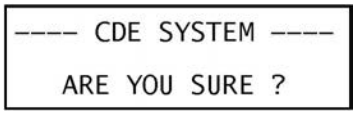


Yoke Reset Submenu

1. Press the **OK** key to reset the pan and tilt motors (Home calibration).
2. The confirmation message ARE YOU SURE? appears.

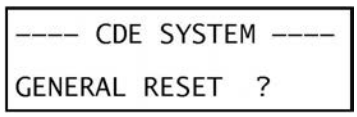


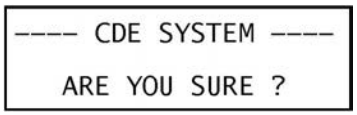
3. Press the **OK** key to confirm. The **Welcome** menu appears.



General Reset Submenu

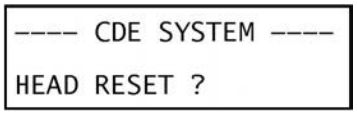
1. Press the **OK** key to reset the pan and tilt motors, zoom, focus and video control boards.
2. The confirmation message ARE YOU SURE? appears.
3. Press the **OK** key to confirm. The **Welcome** menu appears.

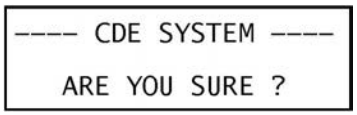




Head Reset Submenu

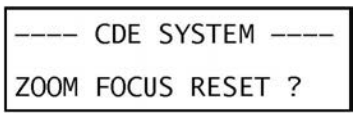
1. Press the **OK** key to reset the zoom, focus and video control boards.
2. The confirmation message ARE YOU SURE? appears.
3. Press the **OK** key to confirm. The **Welcome** menu appears.

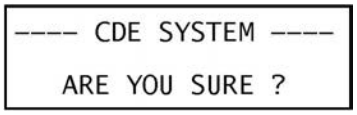




Zoom/Focus reset Submenu

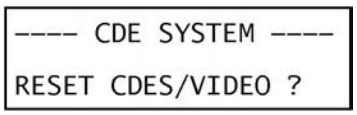
1. Press the **OK** key to reset the zoom control board.
2. The confirmation message ARE YOU SURE? appears.
3. Press the **OK** key to confirm. The **Welcome** menu appears.

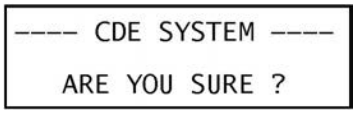




Command Video Reset Submenu

1. Press the **OK** key to reset the video control board.
2. The confirmation message ARE YOU SURE ? appears.
3. Press the **OK** key to confirm. The **Welcome** menu appears.



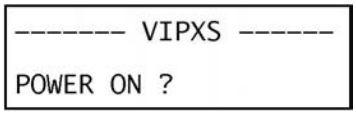


Command Video Menu

1. Press the ▶ or ◀ key to select this menu item.
2. This menu has 17 Video commands submenus.
3. Press the **OK** key to enter the first submenu, then ▲ or ▼ to navigate between submenus if desired:

Power On Submenu

Press the **OK** key to strike the YK50 lamp.

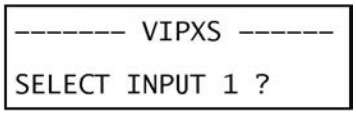


Power Off Submenu

Press the **OK** key to kill the YK50 lamp.

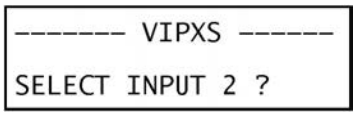
Select Input 1 Submenu

Press the **OK** key to switch to the LX700 input 1.



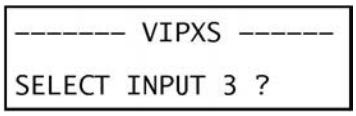
Select Input 2 Submenu

Press the **OK** key to switch to the LX700 input 2.



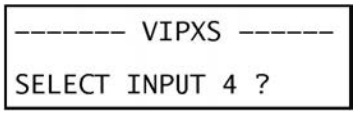
Select Input 3 Submenu

Press the **OK** key to switch to the LX700 input 3.



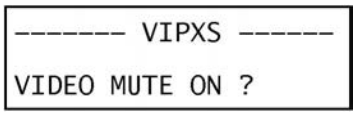
Select Input 4 Submenu

Press the **OK** key to switch to the LX700 input 4.



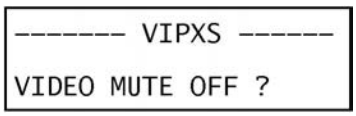
Video Mute On Submenu

Press the **OK** key to close the LX700 shutter.



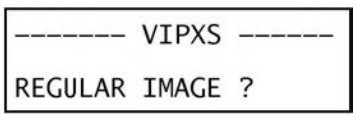
Video Mute Off Submenu

Press the **OK** key to open the LX700 shutter.



Regular Image Submenu

Press the **OK** key to set screen size to regular (4:3).

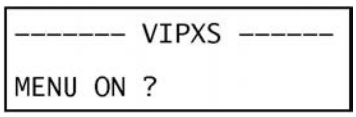


Wide Image Submenu

Press the **OK** key to set screen size to wide (16:9).

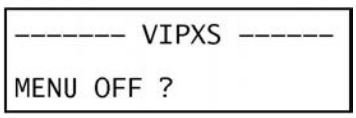
Menu On Submenu

Press the **OK** key to display On-Screen Display menu (OSD menu).



Menu Off Submenu

Press the **OK** key to clear On-Screen Display menu (OSD menu).



Display Clear Submenu

Press the **OK** key to clear all On-Screen Display.

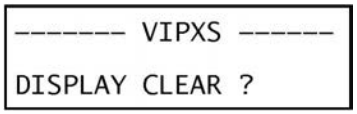
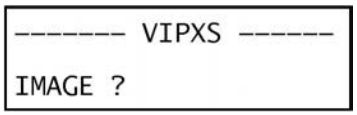


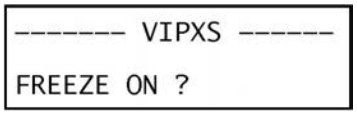
Image Submenu

Press the **OK** key to switch image setting status.



Freeze On Submenu

Press the **OK** key to freeze on-screen image.

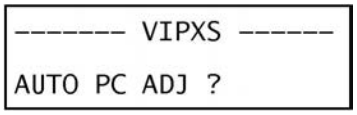


Freeze Off Submenu

Press the **OK** key to cancel freeze mode.

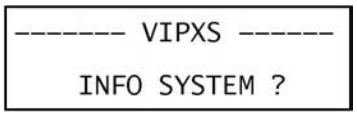
Auto PC Adj Submenu

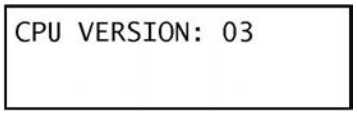
Press the OK key to execute AUTO PC ADJ function.

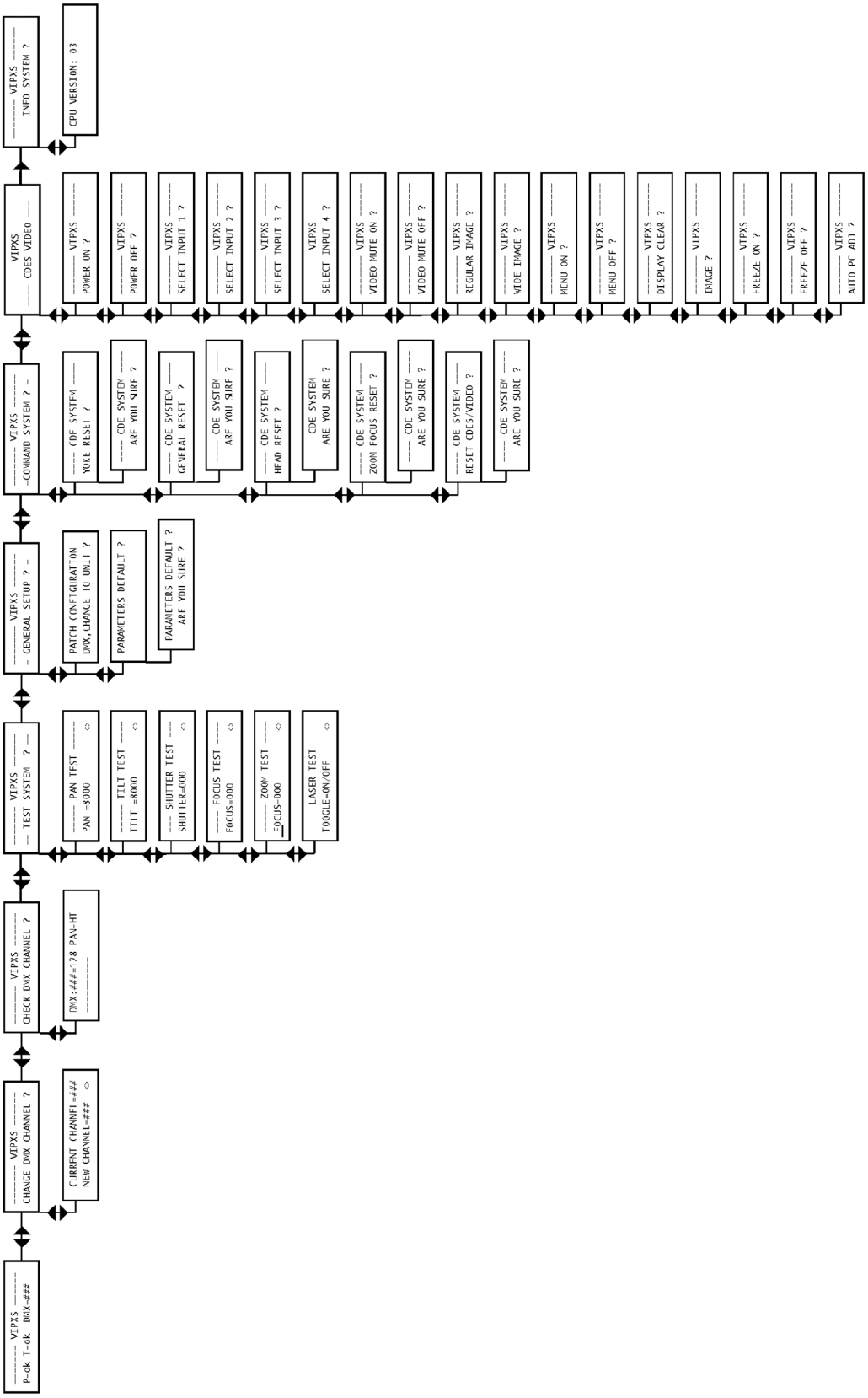


Info System Menu

1. Press the ▶ or ◀ key to select this menu item.
2. Press the **OK** key to display the CPU software version.
3.






VIPXS
P=ok T=ok DMX=###
VIPXS
CHANGE DMX CHANNEL ?
CURRENT CHANNEL=###
NEW CHANNEL=###
VIPXS
CHECK DMX CHANNEL ?
DMX:###=178 PAN-HT
VIPXS
TEST SYSTEM ?
PAN TEST
PAN =3900
TILT TEST
TILT =8000
SHUTTER TEST
SHUTTER=000
FOCUS TEST
FOCUS=000
ZOOM TEST
ZOOM=000
LASER TEST
TOGGLE=ON/OFF
VIPXS
GENERAL SETUP ?
PATCH CONFIGURATION
DMX,CHANGE TO UNIT ?
PARAMETERS DEFAULT ?
PARAMETERS DEFAULT ?
ARE YOU SURE ?
VIPXS
COMMAND SYSTEM ?
CDE SYSTEM
YOKE RESET ?
CDE SYSTEM
ARE YOU SURE ?
CDE SYSTEM
GENERAL RESET ?
CDE SYSTEM
ARE YOU SURE ?
CDE SYSTEM
HEAD RESET ?
CDE SYSTEM
ARE YOU SURE ?
CDE SYSTEM
ZOOM FOCUS RESET ?
CDE SYSTEM
ARE YOU SURE ?
CDE SYSTEM
RESET CDCS/VIDEO ?
CDE SYSTEM
ARE YOU SURE ?
VIPXS
CDES VIDEO
VIPXS
POWER ON ?
VIPXS
POWER OFF ?
VIPXS
SELECT INPUT 1 ?
VIPXS
SELECT INPUT 2 ?
VIPXS
SELECT INPUT 3 ?
VIPXS
SELECT INPUT 4 ?
VIPXS
VIDEO MUTE ON ?
VIPXS
VIDEO MUTE OFF ?
VIPXS
REGULAR IMAGE ?
VIPXS
WIDE IMAGE ?
VIPXS
MENU ON ?
VIPXS
MENU OFF ?
VIPXS
DISPLAY CLEAR ?
VIPXS
IMAGE ?
VIPXS
FREEZE ON ?
VIPXS
FREEZE OFF ?
VIPXS
AUTO PC ADJ ?
VIPXS
INFO SYSTEM ?
CPU VERSION: 03

4.4.3 YK50 DMX Protocol

CHANNEL	DMX VALUE	DEFAULT DMX VALUE	FUNCTION	COMMENTS
1	0-255	128	**Pan High**	
2	0-255	128	**Pan Low**	
3	0-255	128	**Tilt High**	
4	0-255	128	**Tilt Low**	
5	 0-32 33-64 65-96 97-128 129-160	0	**Motor Mode** Mode 0 Mode 1 Mode 2 Mode 3 Mode 4	Motor Mode is the speed at which the yoke will move. Default mode is Mode 0, which is the slowest. Mode 4 is the fastest.
6	 15 20 86 171	0	**Yoke Functions** Zoom-Focus Reset Yoke Reset Load Execute	For all the functions, you must choose the function first, then Load it and Execute it. For example, to reset the Yoke: Set channel #6 at DMX 20 ("Yoke Reset" value), Set channel #6 at DMX 86 to load the function, Set channel #6 at DMX 171 to execute the function.

CHANNEL	DMX VALUE	DEFAULT DMX VALUE	FUNCTION	COMMENTS
7	2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 36 38 56 86 171	0	**Video Functions** Reset Power ON Power OFF Input 1 Input 2 Input 3 Input 4 Mute ON Mute OFF Regular Image (4:3) Wide Image Menu ON Menu OFF Display Clear Image Freeze ON Freeze OFF Auto PC adjust Load Execute	For all functions, you must choose the function first, then Load it and Execute it. For example, to Power ON the Projector: Set channel #7 at DMX 4 ("Power ON" value) Set channel #7 at DMX 86 to Load the function Set channel #7 at DMX 171 to Execute the function.
8	0-255	0	**Zoom**	
9	0-255	0	**Focus**	
10	0-255	255	**Shutter**	0 = Closed 255 = Open

5 Maintenance

Installers, service persons and all other users must maintain a safe operating environment at all times. Read through this section in its entirety and understand all warnings and precautions before attempting to operate the YK50 system.

5.1 Safety Warnings and Guidelines - General Precautions

WARNING All installations and servicing must be performed by Christie accredited service technicians. Use replacement parts that are manufacturer-approved only. Use of any part other than the ones specified by the manufacturer can result in fire, electric shock or risk of personal injury and irreparable equipment damage.

WARNING For protection from electric shock, the YK50 must be grounded (earthed) to protect against electrical shock and the AC power distribution circuit must be equipped with a fuse or circuit breaker and ground-fault (earth-fault) protection.

WARNING Disconnect the YK50 from AC power before removing any cover or part – including fuses – and when not in use. Covers shall only be removed by Christie accredited service technicians.

WARNING Isolate the YK50 from power immediately if any power connector, power cable, seal, cover or other component is damaged, defective, deformed, wet or showing signs of overheating. Do not reconnect power until repairs have been completed.

WARNING Do not expose the YK50 to rain or moisture.

This symbol appears in this manual for procedures where a Pinching or Crushing hazard between chain and sprocket exists. Keep hands clear when unit is powered. Disconnect power before servicing.

This symbol appears in this manual for procedures where a Pinching or Crushing hazard between rotating and stationary surfaces exists. Keep hands clear when unit is powered. Disconnect power before servicing or apply rotation locks.

This symbol appears in this manual for procedures where a tipping hazard exists. Ensure equipment has been secured before proceeding with the next step in the process.

5.2 Pre-Operational Checklist

Before you operate the Christie Nitro YK50, check these items:

- Verify that the voltage selector is properly set (115V or 230V) for the zone in which it operates.
- Verify that the power cable connector is locked to the yoke base.

- Verify that the green LED is flashing on the control panel. This indicates that the yoke is receiving a DMX signal.
- Verify that the connection between the projector and the yoke is correct.
- Verify that the yoke and projector lens will not collide with other objects.
- Verify that the screws on the bracket are tight after balancing the projector.
- Verify that the lens is properly mounted and locked after replacing zoom and focus motors.
- Verify that the yoke is properly grounded.
- Verify that the AC power complies with the local building and electrical codes and has both overload and ground-fault (earth-fault) protection.
- Verify that all power distribution equipment and cables are in good condition and rated for the requirements of the connected devices.
- Verify that the DMX distribution has XLR 5 pin connectors.

5.3 Cleaning

5.3.1 Yoke

The plastic covers may be cleaned with water or alcohol 90.

5.3.2 Projector

Refer to the Maintenance section of the LCD7K projector User Manual for cleaning information.

5.4 Lubrication - Chains

⚠WARNING Pan and tilt chain lubrication must be performed by a Christie accredited service technician. Chains are accessed by removing the covers. See *2.1.1 YK50 Dual Arm Description.*

Chain lubricant may be applied as needed to the pan and tilt chains and checked at a minimum of every 3 months.

5.5 Serviceable Components

5.5.1 User-Serviceable

The components detailed below may be serviced by the user. All other service must be performed by a Christie accredited service technician.

Yoke

Power Cable

WARNING Use only the AC power cable supplied. Do not attempt operation if the AC supply and cable are not within the specified voltage and power range. (See *4.2.2 System Power Up*).

If the power cable is damaged or worn, replace it with the replacement part recommended by Christie.

Front Panel Fuse

WARNING Disconnect the YK50 from power before replacing a fuse. Replace fuses with ones of the same type and rating. Never bypass or bridge a fuse. Covers shall only be removed by Christie accredited service technicians.

DESCRIPTION	VOLTAGE RANGE		FUSE PROTECTION
AC Input	Input Fuse Holder	115V Or 230V	FA 12.5 – Use only Mersen #X084315P

Projector

If a lens is changed, projector balance must be assessed.

NOTICE! *With the YK50 power turned off, balance is only achieved when the projector does not tilt on its own when set to tilt angles of 0°, 45° and 90°. As a result, it may be necessary to perform the balance adjustment more than once until this is achieved.*

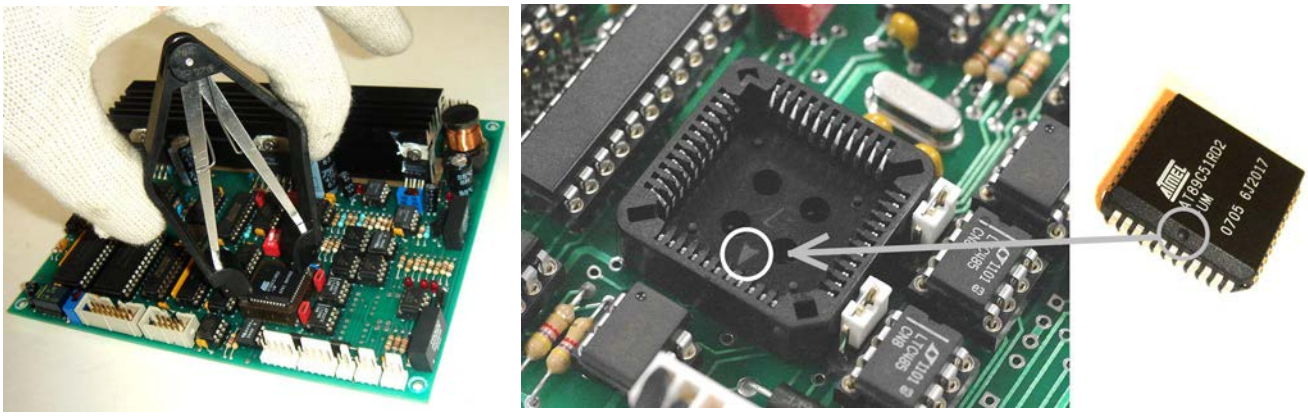
Refer to the Maintenance section of the LCD7K projector User Manual for information on serviceable projector components.

5.5.2 Christie-Serviceable

WARNING The components detailed below must be serviced by a Christie accredited service technician. Yoke internal components are accessed by removing the covers. See *2.1.1 YK50 Dual Arm Description.*

Microchip

All the functions and characteristics of the yoke and projectors are managed by a microchip located on the motherboard. All software upgrades are implemented by changing the microchip installed on the motherboard.



NOTICE! *Use care when inserting the microchip into the socket and ensure leads are not damaged.*

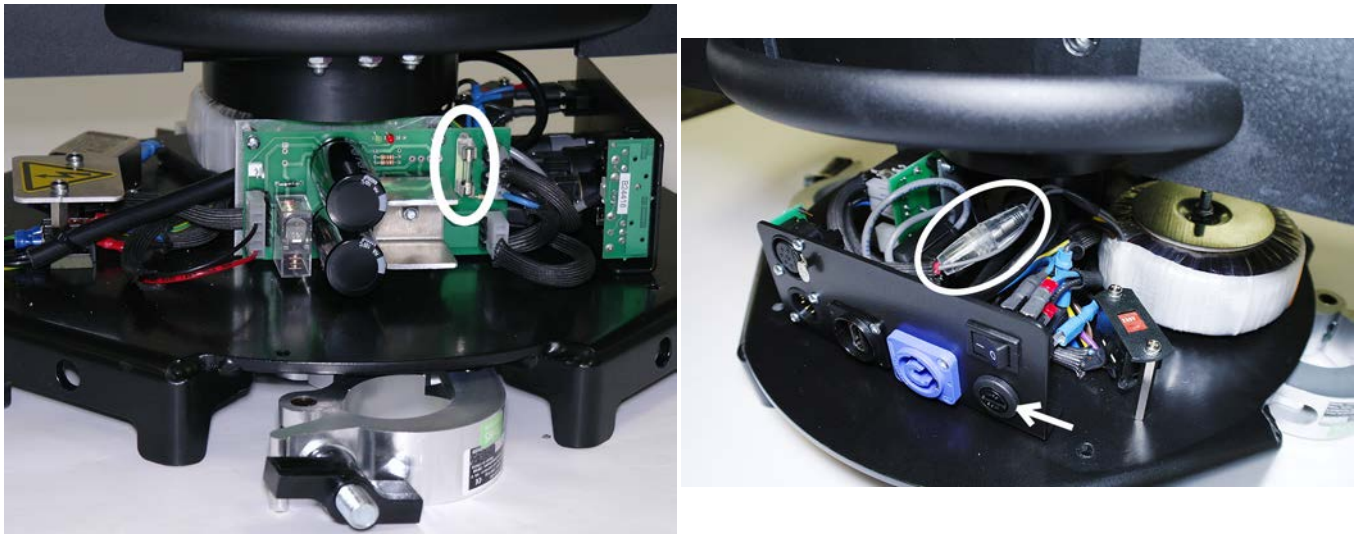
NOTICE! *Microchip must be inserted with the dimple facing the side of the socket indicated by the arrow on the socket base as shown above.*

NOTICE! *Recommended PLCC extraction tool is Bernstein #2-620.*

Fuses

⚠WARNING Disconnect the YK50 from power before replacing a fuse. Replace fuses with ones of the same type and rating. Never bypass or bridge a fuse. Covers shall only be removed by Christie accredited service technicians.

3 fuses are located inside the base.



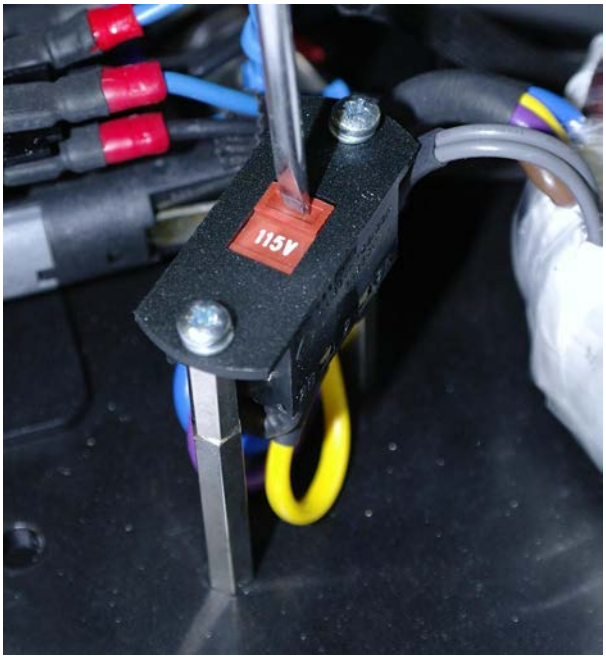
The transformer primary fuse is shown circled in the left hand photo, the secondary fuse is located in an inline fuse holder (right hand photo, circled) and the AC input fuse (user-accessible) is located in the front panel fuse holder (arrow).

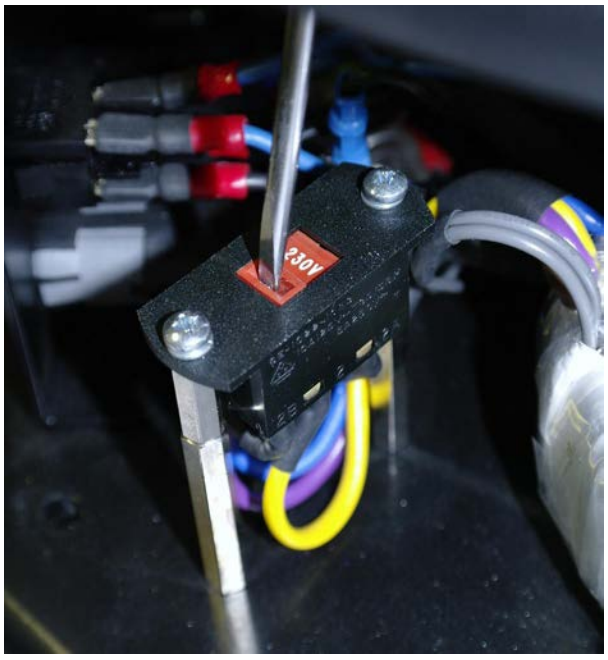
DESCRIPTION	VOLTAGE RANGE		FUSE PROTECTION
Power Supply Transformer (150 VA)	Primary	115-230 V	T1.6A (250V) - Use only Conquer Electronics Co., Ltd # UTE1.60
	Secondary	22 V	T6.3A (250V) - Use only Schurter AG # 0034.3125
AC Input	Input Fuse Holder	115 V or 230 V	FA 12.5 – Use Only Mersen # X084315P

Voltage Selector

Depending on the country, the YK50 voltage selector must be properly set.

By sliding the voltage selector, the YK50 operating voltage can be set at 115V (left photo) or 230V (right photo).





NOTICE! *Factory default setting of the voltage selector is 230V.*

Chain Tension

The chain tension should be checked every 3 months or less, depending on frequency of use.

6 Troubleshooting

This section provides information and procedures for resolving common issues with the YK50 yoke. If the problem cannot be resolved, contact your dealer for assistance.

NOTICE! *Only Christie accredited technicians can perform service listed in the troubleshooting table in 6.1.2 Christie Accredited Technicians.*

6.1 Yoke

6.1.1 User

SYMPTOM	ACTION/SOLUTION	NOTES
No power (Red LED not lit on the control display panel).	Check MAIN ON/OFF switch is ON	
	Check that the Powercon connector is properly locked on the power/ DMX panel.	
	Check the power supply network.	
PAN & TILT movements are not linear (oscillate) when moving to a precise position.	For TILT : Check balance is properly adjusted for the model of lens installed in the projector.	
PAN & TILT cannot be controlled via DMX Lighting console.	Check DMX network linking lighting console to the YK50. Ensure that DMX cables used are certified DMX standard.	
	Check if DMX cable is properly plugged into “DMX IN” input , on the power/DMX panel.	
	Check DMX reception LED indicator on the control display panel (green LED should be flashing)	
	Check that DMX address is properly set.	
	Check that “PAN=ok TILT=ok DMX=###” is displayed on the control panel: DMX signals will start to be received only after the yoke reset is completed.	
No power to the projector.	Check that power cable is properly plugged in and locked into the LCD7K rear terminal.	
Projector doesn’t work using DMX lighting console.	Check that RS232 cable (SUB-D connector) is properly connected to CONTROL PORT on the LCD7K rear terminal.	

SYMPTOM	ACTION/SOLUTION	NOTES
Zoom & focus module doesn't work.	Check that zoom/focus cable is properly plugged in (SUB-D).	
Zoom & focus module movement is not linear.	Check that zoom/focus module is properly installed in the lens.	
No video signal projected.	Check that HDMI or Ethernet cable link is properly connected to the YK50 and to the LCD7K rear terminal.	
	Check that DVI signal input is activated via the LCD7K rear terminal.	

6.1.2 Christie Accredited Technicians

In addition to the actions and solutions in the table in *6.1.1*, technicians should check the following if a symptom is not resolved.

SYMPTOM	ACTION/SOLUTION	NOTES
No power (Red LED not lit on the control display panel).	Check power supply fuses inside the base.	
No reset (after switching the yoke on / Red LED is lit on the control display panel).	Check that PAN and TILT motor cables are properly connected on motherboard (CPU).	
The reset sequence does not run properly: The control panel doesn't display: "PAN=ok TILT=ok DMX=###".	PAN & TILT detection is not working:.	
	Check PAN & TILT sensors input connection on the CPU.	
	Check detection LED indicators (orange light) on the bottom of PAN & TILT sensors are on.	
	Check PAN & TILT detection LED indicator on the CPU.	
The reset sequence does not run properly (slowly): PAN or TILT starts with a high speed movement.	Check motor cables and cables linking motors to CPU.	
PAN & TILT movement are not linear (oscillate) when moving to a precise position.	Check the PAN and TILT chain tensions.	
Video function (DMX channel #7) of the Roadster series projector doesn't work properly.	Remove yoke arm#2 covers and ensure the R232/DMX board is properly set (jumper) and cables properly connected.	

SYMPTOM	ACTION/SOLUTION	NOTES
Zoom & focus module doesn't work.	Remove yoke arm#2 covers and check LED indicators are lighting or flashing on zoom/focus board.	

6.2 Projector

Refer to the troubleshooting section of the LCD7K projector User Manual.

7 Specifications

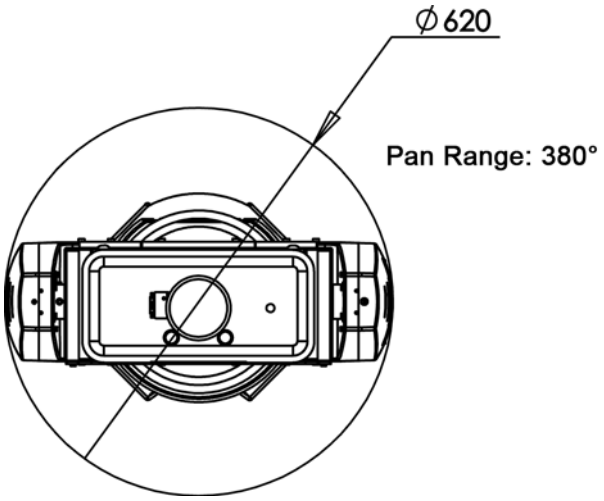
Due to continuing research, specifications are subject to change without notice.

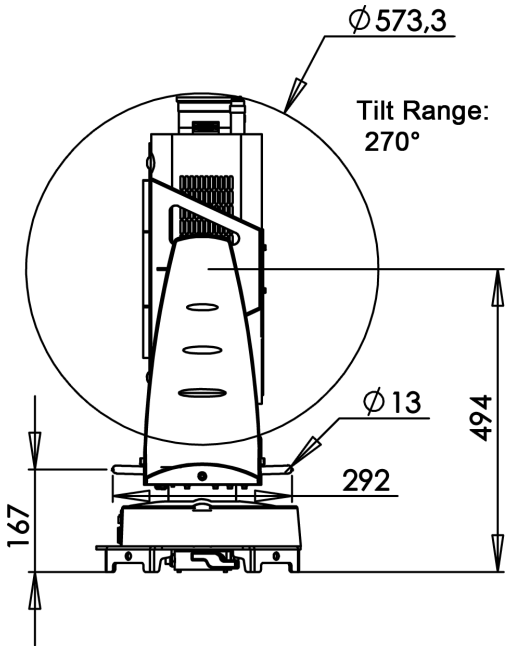
NOTICE! *All dimensions in drawings are in millimeters.*

7.1 General Capabilities

7.1.1 Pan and Tilt Movements

- High Resolution - 10 arc minutes precision – Ratio 64:1
- Linear command - Pan: 380°; Tilt: 270°
- DC servo motor – 24 Volts





7.1.2 Focus Control

- Remote - via DMX dedicated channels

7.1.3 Zoom Control

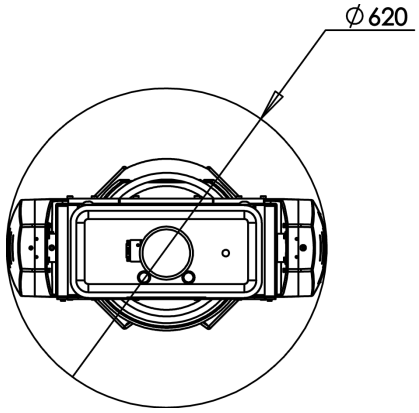
- Remote - via DMX dedicated channels

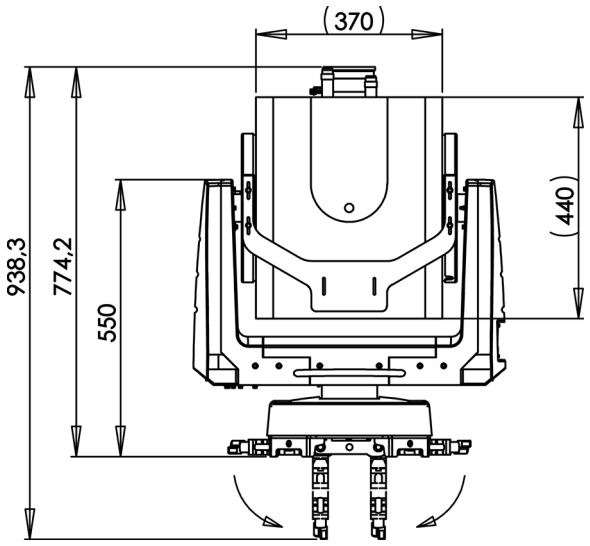
7.2 Physical

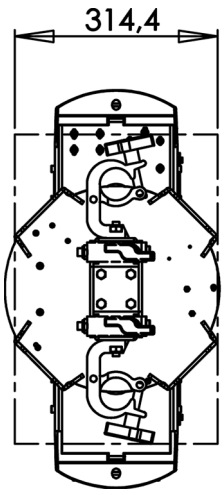
7.2.1 Yoke Dimensions

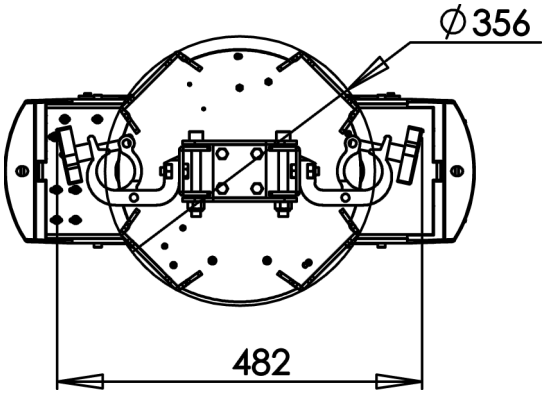
NOTICE! *Dimensions are with lens installed.*

- H 30.5” x W 18.9” x L 24.4” (H 774.2 mm x W 482 mm x L 620 mm)









7.2.2 Yoke Body

- Body structure: Aluminum
- Cover: Composite fiber & plastic
- Color: black

7.2.3 Mounting Options

- Floor mounted, upright
- Truss mounted with Quick Clamp

7.3 Weights

7.3.1 YK50

- 25 kg (55 lbs)

7.3.2 YK50 + LCD7K Projector

- 36 kg (79 lbs) without lens

7.4 Power Requirements

7.4.1 Voltage and Current

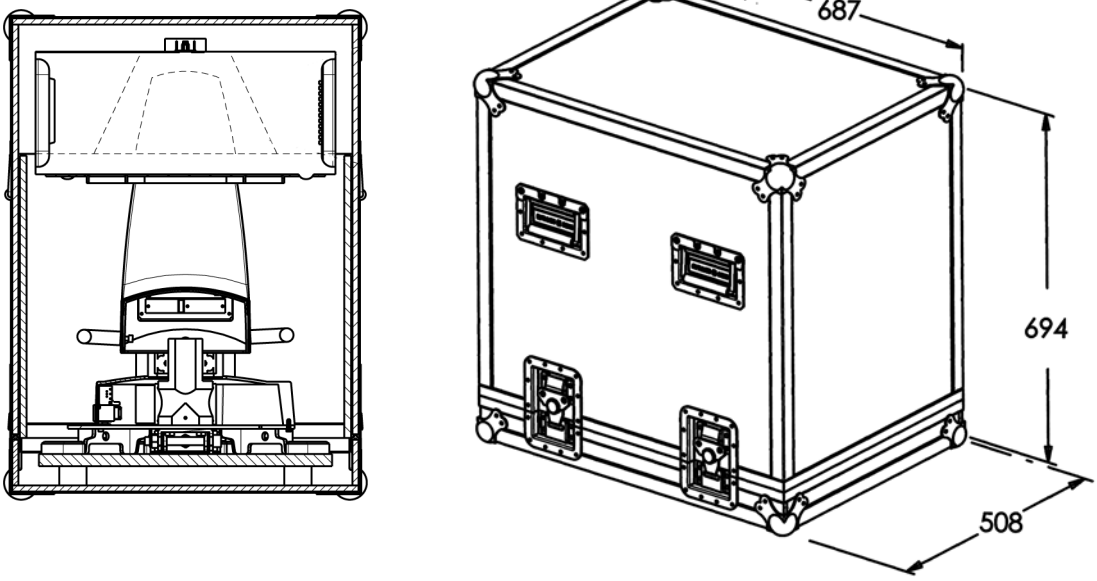
- Rating 100-120 / 200-240VAC ~ 50/60Hz 12A
- Operating current (Yoke only): 0.8A at 230VAC; 1.6A at 115VAC
- Operating current (Yoke + Projector): 5.4A at 230VAC
- Power consumption (Yoke + Projector): 710W max

7.4.2 Fuses

- Power Supply transformer Primary: T1.6A (Conquer Electronics Co., Ltd # UTE1.60)
- Power Supply transformer Secondary: T6.3A (Schurter AG, # 0034.3125)
- Power Supply input (Front connector panel fuse holder): FA12.5 (Mersen # X084315P)

7.5 Flight Case

7.5.1 Dimensions



7.5.2 Weight

Empty

31.5 kg (69.5 lbs)

With YK50 + LCD7K Projector

67.5 kg (149 lbs) without lens

7.6 Regulatory

NOTICE! *These standards refer to the yoke only. See projector manual for applicable standards.*

7.6.1 Safety

- CAN/CSA C22.2 No. 60950-1
- UL 60950-1
- IEC 60950-1
- EN60950

7.6.2 Electro-Magnetic Compatibility

- FCC CFR47, Part 15, Subpart B, Class A – Unintentional Radiators
- EN 61000-6-2
- EN 61000-6-4
- EN 61000-3-2
- EN 61000-3-3

7.6.3 Environmental

The product must conform to:

- EU Directive (2002/95/EC) on the restriction of the use of certain hazardous substances (RoHS) in electrical and electronic equipment and the applicable official amendment(s).
- EU Regulation (EC) No. 1907/2006 on the registration, evaluation, authorization and restriction of chemicals (REACH) and the applicable official amendment(s).
- EU Directive (2002/96/EC) on waste and electrical and electronic equipment (WEEE) and the applicable official amendment(s).
- China Ministry of Information Industry Order No.39 (02/2006) on the control of pollution caused by electronic information products, the hazardous substances concentration limits (SJ/T11363-2006), and the applicable product marking requirement (SJ/T11364-2006).

7.6.4 Marking

This product shall conform to all relevant Canadian, US, and European directives, standards, safety, health and environmental concerns and bear the following markings at product launch:

- UL
- CE
- RoHS
- WEEE

International packaging recycling mark requirements:

- EU Directive (2002/96/EC) on waste and electrical and electronic equipment (WEEE);
- EU Directive (94/62/EC) on packaging and packaging waste;
- China packaging recycling mark standard (GB18455-2001).

7.7 Environment

- Maximum ambient temperature (T_a max): 45°C (113°F)
- Minimum ambient temperature (T_i max): -5°C (23°F)

Corporate offices

USA – Cypress
ph: 714-236-8610

Canada – Kitchener
ph: 519-744-8005

Worldwide offices

United Kingdom
ph: +44 118 977 8000

France
ph: +33 (0) 1 41 21 00 36

Germany
ph: +49 2161 664540

Eastern Europe
ph: +36 (0) 1 47 48 100

Middle East
ph: +971 (0) 4 299 7575

Spain
ph: + 34 91 633 9990

Singapore
ph: +65 6877-8737

Beijing
ph: +86 10 6561 0240

Shanghai
ph: +86 21 6278 7708

Japan
ph: 81-3-3599-7481

South Korea
ph: +82 2 702 1601

For the most current technical documentation, please visit www.christiedigital.com

CHRISTIE®